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11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

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(509) 924-9200 FAX 924-9290

(503) 906-9200 FAX 906-9210 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT V

Work Order #: BIGUUSO PIGIOIG

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CLIENT: BRISTOL		, , , , , , , , , , , , , , , , , , ,			1	ICE TO									TUR		D REQUEST in Business I	ays*
REPORT TO: ANNE K	RANAW	ETTE	R	•	BR	SL	TOI	_							10	Organ	4 3 2 1	
ADDRESS: AMCHIT	KA, A														STD.		Annual present present present	<1
PHONE: 907-770.0			OC1	75	PO N	IUMRE	R. 1	10°	70					-		5 4	um Hydrocarbon Analyses 3 2 1 < 1	
PROJECT NAME: ANCH	TRA				110.11			ED ANA		5					S	TD.	Please Specify	nesii
PROJECT NUMBER: 2109		d					•	•				and C	Oxygen	•		ОТН		
SAMPLED BY: Kyle /Anne		7	3 3	Al Kalimity	دو_ا	6	7	. 5	, 5			Dissolut	2 5	5	*Turna	round Requests	less than standard may incur Rush Cl	aurges.
CLIENT SAMPLE	SAMPLING	F .	Hydromybus EPA 8260	2	0,0	sufute	0,0	Mitrate -	25.05	>	100		A icul	X X	MATRIX	# OF		NCA WO
IDENTIFICATION	DATE/TIME	PER	HYARE EPA	¥	Chlorate	Sci	Terbidit	Ritory Nitroy	Amenia	TKN	1=	Total Solid	Chemical Deman	MB,	(W, S, O)	CONT.	COMMENTS	ID
1. OIAMMF085W 7/	17/01/10	5 X	X	X	X	X	X	X	X	X	X	X	X	X	W	Polin	[OIAMAFOSSW]	-01
12. OIAMMF095W7/	27/01 10()5 >	Y	×	X	X	X	X	X	X	X,	×	x	X	W	きるる	10 containers	-62
3. O' AM MF 10 5W 7/2	27/01 100	5 ×	X	X	X	X	Χ	*	X	X	X	X	x	X	W	KINC Q	10 containers	-03
4. OI AMME 11 SW 7/	27/01 09	25 X	X	X	አ	X	X	×	X	X	X	X	X	X	W	Church t	10 centainers	-04
5. 01 AMMF 12 SW 7/	27/01 09		K	7	×	X	X	X	X	X	X	X	*	X	W	4469	10 containers	-05
6.01 AMMF13 SW 7/	27/01 112	.5 X	X	X	X	*	X	X	۲	×	X	X	×	X	W 1	W V	10 centainers	-06
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Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

8 October, 2001

Anne Kranawetter Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

RE: Amchitka

Enclosed are amended results of analyses for samples received by the laboratory on 07/31/01 10:04. If you have any questions concerning this report, please feel free to contact me. These results supercede all previous results reported by the laboratory.

Sincerely,

Jerry Orlando

Project Manager/QA

for alout

Work Orders included in this report:

P1G1016



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

ANALYTICAL REPORT FOR SAMPLES - Amended

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
01AMMF08SW	P1G1016-01	Water	07/27/01 11:05	07/31/01 10:04
01AMMF09SW	P1G1016-02	Water	07/27/01 10:05	07/31/01 10:04
01AMMF10SW	P1G1016-03	Water	07/27/01 10:05	07/31/01 10:04
01AMMF11SW	P1G1016-04	Water	07/27/01 09:25	07/31/01 10:04
01AMMF12SW	P1G1016-05	Water	07/27/01 09:45	07/31/01 10:04
01AMMF13SW	P1G1016-06	Water	07/27/01 11:25	07/31/01 10:04
01AMMF14SW	P1G1016-07	Water	07/27/01 11:35	07/31/01 10:04
01AMMF15SW	P1G1016-08	Water	07/27/01 12:05	07/31/01 10:04

North Creek Analytical - Portland



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Total Metals per EPA 6000/7000 Series Methods North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF08SW (P1G1016-01) Water				S	Sampled: 07/2	7/01 Recei	ived: 07/31/0	01	
Arsenic	ND	0.00100	mg/l	1	EPA 6020	08/01/01	08/02/01	1080883	
Barium	ND	0.00200	11	17	"	Ħ	Ħ	**	
Cadmium	ND	0.00100	n	"	n	**	ti	"	
Chromium	ND	0.00100	#	11	11	11	11	,	
Copper	ND	0.00200	19	"	n	11	11	**	
Iron	0.224	0.100	н	"	EPA 6010A	08/13/01	08/15/01	1081293	
Lead	0.00159	0.00100	"	н	EPA 6020	08/01/01	08/02/01	1080883	
Magnesium	2.21	0.100	rt .	11	EPA 6010A	08/13/01	08/15/01	1081293	
Manganese	0.0233	0.00200	n	11	EPA 6020	08/01/01	08/02/01	1080883	
Potassium	2.28	1.00	11	11	EPA 6010A	08/13/01	08/15/01	1081293	
Selenium	0.00190	0.00100	"	u	EPA 6020	08/01/01	08/02/01	1080883	
Silver	ND	0.00100	н	n	9	H	11	"	
Sodium	16.8	1.00	**	n	EPA 6010A	08/13/01	08/15/01	1081293	
Zinc	ND	0.00500	11	u	EPA 6020	08/01/01	08/02/01	1080883	
01AMMF09SW (P1G1016-02) Water				,	Sampled: 07/2	7/01 Rece	ived: 07/31/	01	
Arsenic	ND	0.00100	mg/l	1	EPA 6020	08/01/01	08/03/01	1080883	
Barium	ND	0.00200	11	"	n	n	11	ti	
Cadmium	ND	0.00100	11	**	11	"	11	n	
Chromium	ND	0.00100	H	B	u	n	11	U	
Copper	ND	0.00200	31	**	н	U	n	п	
Iron	0.652	0.100	19	н	EPA 6010A	08/13/01	08/15/01	1081293	
Lead	ND	0.00100	**	н	EPA 6020	08/01/01	08/03/01	1080883	
Magnesium	2.91	0.100	**	**	EPA 6010A	08/13/01	08/15/01	1081293	
Manganese	0.0298	0.00200	**	**	EPA 6020	08/01/01	08/02/01	1080883	
Potassium	ND	1.00	н	"	EPA 6010A	08/13/01	08/15/01	1081293	
Selenium	0.00137	0.00100	n	н	EPA 6020	08/01/01	08/03/01	1080883	
Silver	ND	0.00100	"	n	Ħ	11	U	11	
Sodium	23.1	1.00	**	"	EPA 6010A	08/13/01	08/15/01	1081293	
Zinc	ND	0.00500	**	н	EPA 6020	08/01/01	08/03/01	1080883	

North Creek Analytical - Portland





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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090)

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Total Metals per EPA 6000/7000 Series Methods North Creek Analytical - Portland

Parametric Note Parametri	Anaiyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
Barium ND 0.00200 "	01AMMF10SW (P1G1016-03) Water				Ş	Sampled: 07/2	7/01 Rece	ived: 07/31/0	01	
Cadmium	Arsenic	ND	0.00100	mg/l	1	EPA 6020	08/01/01	08/03/01	1080883	
Chromium	Barium	ND	0.00200	P	If	*	н	11	n	
Copper	Cadmium	ND	0.00100	**	rt	"	n	11	n	
Iron 0.595 0.100 " EPA 6010A PFA 6010A PFA 6010A PFA 6020 08/13/01 PFA 603/01 PFA FA 603/01 PFA 603/01 PFA FA 603/01 PFA FA 603/01 PFA FA 603/01 PFA FA 603/01 PFA 603/01 PFA FA FA 603/01 PFA FA 603/01 PFA FA FA 603/01 PFA FA 603/01 PFA FA 603/01 PFA FA FA FA FA FA FA 603/01 PFA FA FA FA FA FA FA FA FA 603/01 PFA FA F	Chromium	ND	0.00100	**	"	**	**	11	Ħ	
Lead ND	Copper	ND	0.00200	**	"	11	11	**	11	
Lead ND 0.00100 " " EPA 6020 08/01/01 08/03/01 1080883 Magnesium 2.99 0.100 " " EPA 6010A 08/13/01 08/15/01 1081293 Manganese 0.0539 0.00200 " " EPA 6010A 08/13/01 08/15/01 1081293 Selenium 0.00180 0.00100 " " EPA 6020 08/01/01 08/03/01 1080883 Silver ND 0.00100 " " EPA 6020 08/01/01 08/13/01 1080883 Silver ND 0.00100 " " EPA 6010A 08/13/01 08/15/01 1080883 Silver ND 0.00500 " " EPA 6010A 08/13/01 08/15/01 1081293 Zinc ND 0.00500 " " EPA 6020 08/01/01 08/03/01 1081293 Arsenic ND 0.00100 mg/1 1 EPA 6020 08/01/01 08/03/01 </td <td>Iron</td> <td>0.595</td> <td>0.100</td> <td>н</td> <td>it.</td> <td>EPA 6010A</td> <td>08/13/01</td> <td>08/15/01</td> <td>1081293</td> <td></td>	Iron	0.595	0.100	н	it.	EPA 6010A	08/13/01	08/15/01	1081293	
Manganese 0.0539 0.00200 " EPA 6020 08/01/01 08/02/01 1080883 Potassium 1.16 1.00 " EPA 6010A 08/13/01 08/15/01 1081293 Selenium 0.00180 0.00100 " EPA 6020 08/01/01 08/03/01 1080883 Silver ND 0.00100 " EPA 6010A 08/13/01 08/15/01 1080883 Sodium 23.9 1.00 " EPA 6010A 08/13/01 08/15/01 1081293 Zinc ND 0.00500 " EPA 6020 08/01/01 08/03/01 1080883 Sampled: 07/27/01 Received: 07/31/01 Arsenic ND 0.00100 mg/1 1 EPA 6020 08/01/01 08/03/01 1080883 Barium ND 0.00200 " " " " " " " " " " " " " " " " " " "	Lead	ND	0.00100	17	"	EPA 6020	08/01/01	08/03/01		
Potassium	Magnesium	2.99	0.100	44	**	EPA 6010A	08/13/01	08/15/01	1081293	
Selenium O.00180 O.00100 " " EPA 6020 O.00101 O.003001 1080883 Silver ND O.00100 " " EPA 6020 O.00101 O.00100 O.00100 " " EPA 6020 O.00101 O	Manganese	0.0539	0.00200	"	**	EPA 6020	08/01/01	08/02/01	1080883	
Silver ND 0.00100 " " " " " " " " " " " " " " " " " "	Potassium	1.16	1.00	**	ıı	EPA 6010A	08/13/01	08/15/01	1081293	
Sodium 23.9 1.00 " EPA 6010A 08/13/01 08/15/01 1081293	Selenium	0.00180	0.00100	н	"	EPA 6020	08/01/01	08/03/01	1080883	
ND 0.00500 " EPA 6020 08/01/01 08/03/01 1080883	Silver	ND	0.00100	H	n	11	**	#		
O1AMMF11SW (P1G1016-04) Water Sampled: 07/27/01 Received: 07/31/01 Arsenic ND 0.00100 mg/l 1 EPA 6020 B/01/01 B/03/01	Sodium	23.9	1.00	H	n	EPA 6010A	08/13/01	08/15/01	1081293	
Arsenic ND 0.00100 mg/l I EPA 6020 08/01/01 08/03/01 1080883 Barium ND 0.00200 "	Zinc	ND	0.00500	17	11	EPA 6020	08/01/01	08/03/01	1080883	
Barium ND 0.00200 " <	01AMMF11SW (P1G1016-04) Water					Sampled: 07/2	7/01 Rece	ived: 07/31/	01	
Cadmium ND 0.00100 "	Arsenic	ND	0.00100	mg/l	1	EPA 6020	08/01/01	08/03/01	1080883	
Chromium ND 0.00100 "	Barium	ND	0.00200	п	n	11	и	n	11	
Copper 0.00202 0.00200 "	Cadmium	ND	0.00100	**	n	Ħ	Ħ	H	п	
Iron 0.531 0.100 " " EPA 6010A 08/13/01 08/15/01 1081293 Lead ND 0.00100 " " EPA 6020 08/01/01 08/03/01 1080883 Magnesium 3.12 0.100 " " EPA 6010A 08/13/01 08/15/01 1081293 Manganese 0.0184 0.00200 " " EPA 6020 08/01/01 08/02/01 1080883 Potassium 1.21 1.00 " " EPA 6010A 08/13/01 08/15/01 1081293 Selenium 0.00163 0.00100 " " EPA 6020 08/01/01 08/03/01 1081293	Chromium	ND	0.00100	**	н	"	u	**	"	
Lead ND 0.00100 " " EPA 6020 08/01/01 08/03/01 1080883 Magnesium 3.12 0.100 " " EPA 6010A 08/13/01 08/15/01 1081293 Manganese 0.0184 0.00200 " " EPA 6020 08/01/01 08/02/01 1080883 Potassium 1.21 1.00 " " EPA 6010A 08/13/01 08/15/01 1081293 Selenium 0.00163 0.00100 " " EPA 6020 08/01/01 08/03/01 1080883	Copper	0.00202	0.00200	n	11	11	n n	"	n	
Magnesium 3.12 0.100 " " EPA 6010A 08/13/01 08/15/01 1081293 Manganese 0.0184 0.00200 " " EPA 6020 08/01/01 08/02/01 1080883 Potassium 1.21 1.00 " " EPA 6010A 08/13/01 08/15/01 1081293 Selenium 0.00163 0.00100 " " EPA 6020 08/01/01 08/03/01 1080883	Iron	0.531	0.100	u	11	EPA 6010A	08/13/01	08/15/01	1081293	
Manganese 0.0184 0.00200 " " EPA 6020 08/01/01 08/02/01 1080883 Potassium 1.21 1.00 " " EPA 6010A 08/13/01 08/15/01 1081293 Selenium 0.00163 0.00100 " " EPA 6020 08/01/01 08/03/01 1080883	Lead	ND	0.00100	11	"	EPA 6020	08/01/01	08/03/01	1080883	
Potassium 1.21 1.00 " " EPA 6010A 08/13/01 08/15/01 1081293 Selenium 0.00163 0.00100 " " EPA 6020 08/01/01 08/03/01 1080883	Magnesium	3.12	0.100	n	11	EPA 6010A	08/13/01	08/15/01	1081293	
Selenium 0.00163 0.00100 " EPA 6020 08/01/01 08/03/01 1080883	8	0.0184	0.00200	n	It	EPA 6020	08/01/01	08/02/01	1080883	
	Potassium	1.21	1.00	11	н	EPA 6010A	08/13/01	08/15/01	1081293	
			*****	н	11					
	Silver	ND	0.00100	n	11	**	11	Ħ	Ħ	
Sodium 22.9 1.00 " " EPA 6010A 08/13/01 08/15/01 1081293			1.00	IF	Ħ	EPA 6010A		08/15/01	1081293	
Zinc ND 0.00500 " " EPA 6020 08/01/01 08/03/01 1080883	Zinc	ND	0.00500	"	#	EPA 6020	08/01/01	08/03/01	1080883	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jerry Orlando, Project Manager/QA

North Creek Analytical, Inc. **Environmental Laboratory Network**

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Total Metals per EPA 6000/7000 Series Methods North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF12SW (P1G1016-05) Water				9	Sampled: 07/2	7/01 Recei	ived: 07/31/0	01	
Arsenic	ND	0.00100	mg/l	1	EPA 6020	08/01/01	08/03/01	1080883	
Barium	ND	0.00200	n	n	n	и	н	**	
Cadmium	ND	0.00100	n	**	**	Ħ	11	n	
Chromium	ND	0.00100	**	II .	н	n	"	11	
Copper	0.00202	0.00200	Ħ	**	11	**	11	11	
Iron	0.552	0.100	**	11	EPA 6010A	08/13/01	08/15/01	1081293	
Lead	ND	0.00100	"	t)	EPA 6020	08/01/01	08/03/01	1080883	
Magnesium	3.17	0.100	Ħ	n	EPA 6010A	08/13/01	08/15/01	1081293	
Manganese	ND	0.0194	**	9.71	EPA 6020	08/01/01	08/02/01	1080883	
Potassium	1.33	1.00	11	1	EPA 6010A	08/13/01	08/15/01	1081293	
Selenium	0.00142	0.00100	"	n	EPA 6020	08/01/01	08/03/01	1080883	
Silver	ND	0.00100	н	"	H	ıı	11	H	
Sodium	23.5	1.00	**	n	EPA 6010A	08/13/01	08/15/01	1081293	
Zinc	ND	0.00500	ij	n	EPA 6020	08/01/01	08/03/01	1080883	
01AMMF13SW (P1G1016-06) Water					Sampled: 07/2	7/01 Rece	ived: 07/31/	01	
Arsenic	ND	0.00100	mg/l	1	EPA 6020	08/01/01	08/03/01	1080883	
Barium	ND	0.00200	11	11	n	n	11	17	
Cadmium	ND	0.00100	Ħ	Ħ	11	п	ır	n	
Chromium	ND	0.00100	n	**	n	11	н	11	
Copper	0.00464	0.00200	п	н	r r	tt.	17	n	
Iron	0.707	0.100	11	n	EPA 6010A	08/13/01	08/15/01	1081293	
Lead	0.00711	0.00100	11	11	EPA 6020	08/01/01	08/03/01	1080883	
Magnesium	1.68	0.100	u	11	EPA 6010A	08/13/01	08/15/01	1081293	
Manganese	0.00720	0.00200	11	11	EPA 6020	08/01/01	08/02/01	1080883	
Potassium	1.33	1.00	"	"	EPA 6010A	08/13/01	08/15/01	1081293	
Selenium	0.00134	0.00100	"	n	EPA 6020	08/01/01	08/03/01	1080883	
Silver	ND	0.00100	**	11	"	11	n	n	
Sodium	15.3	1.00	п	Ħ	EPA 6010A	08/13/01	08/15/01	1081293	
Zinc	ND	0.00500	11	Ħ	EPA 6020	08/01/01	08/03/01	1080883	

North Creek Analytical - Portland

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Jerry Orlando, Project Manager/QA

North Creek Analytical, Inc. **Environmental Laboratory Network**

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Total Metals per EPA 6000/7000 Series Methods North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF14SW (P1G1016-07) Water					Sampled: 07/2	7/01 Recei	ived: 07/31/0	01	
Arsenic	ND	0.00100	mg/l	1	EPA 6020	08/01/01	08/03/01	1080883	
Barium	ND	0.00200	11	11	н	"	11	1000005	
Cadmium	ND	0.00100	n	"	11	n	n	"	
Chromium	ND	0.00100	H	"	11	**	11	I)	
Copper	0.00215	0.00200	н	**	н	It	н	ır	
Iron	0.532	0.100	17	11	EPA 6010A	08/13/01	08/15/01	1081293	
Lead	ND	0.00100	19	н	EPA 6020	08/01/01	08/03/01	1080883	
Magnesium	3.18	0.100	***	11	EPA 6010A	08/13/01	08/15/01	1081293	
Manganese	0.0104	0.00200	**	Ħ	EPA 6020	08/01/01	08/02/01	1080883	
Potassium	1.21	1.00	**	11	EPA 6010A	08/13/01	08/15/01	1081293	
Selenium	0.00105	0.00100	n	11	EPA 6020	08/01/01	08/03/01	1080883	
Silver	ND	0.00100	Ħ	11	"	"	n	11	
Sodium	21.8	1.00	**	"	EPA 6010A	08/13/01	08/15/01	1081293	
Zinc	0.00786	0.00500	**	n	EPA 6020	08/01/01	08/03/01	1080883	

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090 Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Mercury by EPA Method 1631 North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF08SW (P1G1016-01) Water	-			<u> </u>	Sampled: 07/27/	01 Rece	ived: 07/31/0	01	
Mercury	0.0000250	0.0000100	mg/l	1	EPA 1631	08/07/01	08/09/01	1081079	
01AMMF09SW (P1G1016-02) Water					Sampled: 07/27/	01 Rece	ived: 07/31/0	01	
Mercury	0.0000150	0.0000100	mg/l	1	EPA 1631	08/07/01	08/09/01	1081079	
01AMMF10SW (P1G1016-03) Water					Sampled: 07/27/	01 Rece	ived: 07/31/0	01	
Mercury	0.0000200	0.0000100	mg/l	1	EPA 1631	08/07/01	08/09/01	1081079	
01AMMF11SW (P1G1016-04) Water					Sampled: 07/27/	01 Rece	ived: 07/31/	01	
Mercury	0.0000212	0.0000100	mg/l	1	EPA 1631	08/07/01	08/09/01	1081079	
01AMMF12SW (P1G1016-05) Water					Sampled: 07/27/	'01 Rece	ived: 07/31/	01	
Mercury	0.0000188	0.0000100	mg/l	1	EPA 1631	08/07/01	08/09/01	1081079	
01AMMF13SW (P1G1016-06) Water					Sampled: 07/27/	'01 Rece	ived: 07/31/0	01	
Mercury	0.0000200	0.0000100	mg/l	1	EPA 1631	08/07/01	08/09/01	1081079	
01AMMF14SW (P1G1016-07) Water					Sampled: 07/27	01 Rece	ived: 07/31/	01	
Mercury	0.0000188	0.0000100	mg/l	1	EPA 1631	08/07/01	08/09/01	1081079	

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF08SW (P1G1016-01) Water			<u>-</u>		Sampled: 07/2	7/01 Recei	ived: 07/31/0	01	
Acetone	ND	25.0	ug/l	1	EPA 8260B	08/04/01	08/04/01	1081014	
Benzene	ND	1.00	н	11	n	"	11	1001014	
Bromobenzene	ND	1.00	n	**	"	n	"	и	
Bromochloromethane	ND	1.00	71	**	n	n	**	n	
Bromodichloromethane	ND	1.00	"	**	"	n	11	,,	
Bromoform	ND	1.00	11	11	,	Ħ	n	"	
Bromomethane	ND	5.00	**	"	**	,,	"		
2-Butanone	ND	10.0	**	**	11	n	**	17	
n-Butylbenzene	ND	5.00	11	н	,,	11	11	u	
sec-Butylbenzene	ND	1.00	n	H	**	11	11	by .	
tert-Butylbenzene	ND	1.00	"	**		"	**	**	
Carbon disulfide	ND	10.0	11	11	**	u	11	,,	
Carbon tetrachloride	ND	1.00	11	Ħ	"	n ·	n	н	
Chlorobenzene	ND	1.00	11	"	#1	11	n	"	
Chloroethane	ND	1.00	**	**	11	"	11		
Chloroform	ND	1.00	11	н	11	н	11		
Chloromethane	ND	5.00	"	n	**		,,	"	
2-Chlorotoluene	ND	1.00	11	n	"	"	"	" "	
4-Chlorotoluene	ND	1.00	п	11	**		,,	"	
1,2-Dibromo-3-chloropropane	ND	5.00	,,	11	п	"	**	"	
Dibromochloromethane	ND	1.00	"	n	"	,,	**	н	
1,2-Dibromoethane	ND	1.00	н	**	**	11	n	n	
Dibromomethane	ND	1.00	11	**	at .	n	,,	"	
1,2-Dichlorobenzene	ND	1.00	н	**	,,	H	11	11	
1,3-Dichlorobenzene	ND	1.00	11	п	**	11	,,	,,	
1,4-Dichlorobenzene	ND	1.00	11	и	**	"	11	**	
Dichlorodifluoromethane	ND	5.00	1)	11	ıı	11	*	H	
1,1-Dichloroethane	ND	1.00	n	"	"	n	**	**	
1,2-Dichloroethane	ND	1.00	11	11	,,	11	"		
1,1-Dichloroethene	ND	1.00		н	11	ır	,,	"	
cis-1,2-Dichloroethene	ND	1,00	D	11	tt.	"	"	н	
trans-1,2-Dichloroethene	ND	1.00	-11	11	u	"	11	11	
1,2-Dichloropropane	ND	1.00	11	11	**	н	,,	"	
1,3-Dichloropropane	ND	1.00	"	*1	n	"	**	н	
2,2-Dichloropropane	ND	1.00	11	π	,,	n	"	11	
1,1-Dichloropropene	ND	1.00	n	11	"	н	,,	,,	
cis-1,3-Dichloropropene	ND	1.00	**	**	**	11	п	17	
trans-1,3-Dichloropropene	ND	1.00	11	н	11	n	"	"	
Ethylbenzene	ND	1.00	,,	**	n	n	11	,,	

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF08SW (P1G1016-01) Water				(Sampled: 07/2	7/01 Rece	ived: 07/31/0	01	
Hexachlorobutadiene	ND	2.00	ug/l	1	EPA 8260B	08/04/01	08/04/01	1081014	
2-Hexanone	ND	10.0	11	II	н	11	n	11	
Isopropylbenzene	ND	2.00	11	*	n	II	n	11	
p-Isopropyltoluene	ND	2.00	**	11	"	0	11	**	
4-Methyl-2-pentanone	ND	5.00	11	**	"	n	"	**	
Methyl tert-butyl ether	ND	1.00	11	tt.	u	"	"	lt.	
Methylene chloride	ND	5.00	п	**	n	"	11	n	
Naphthalene	ND	2.00	11	**	n	,	H	**	
n-Propylbenzene	ND	1.00	11	Ħ	n	11	11	n	
Styrene	ND	1.00	11	11	11	lt .	Ħ		
1,1,1,2-Tetrachloroethane	ND	1.00	n	,,	11	n	11	u	
1,1,2,2-Tetrachloroethane	ND	1.00	n	"	11	11	9	н	
Tetrachloroethene	ND	1.00	11	**	11	n	11	17	
Toluene	ND	1.00	**	и	п	n	n	**	
1,2,3-Trichlorobenzene	ND	1.00	"	n	11	Ħ	n	11	
1,2,4-Trichlorobenzene	ND	1.00	17	n	н	н	**	11	
1,1,1-Trichloroethane	ND	1.00	11	11	n	n	"	ч	
1,1,2-Trichloroethane	ND	1.00	Ħ	"	н	**	11	11	
Trichloroethene	ND	1.00	11	**	tt	11	H	71	
Trichlorofluoromethane	ND	1.00	н	11	n	11	ч	17	
1,2,3-Trichloropropane	ND	1.00	17	11	"	11	0	"	
1,2,4-Trimethylbenzene	ND	1.00	17	17	11	п	**	*	
1,3,5-Trimethylbenzene	ND	1.00	н	п	"	н	v v	**	
Vinyl chloride	ND	1.00	**	11	ď	**	n	u	
o-Xylene	ND	1.00	**	u	н	*	11	п	
m,p-Xylene	ND	2.00	11	"	11	Ħ	ı,	11	
Surr: 4-BFB	99.5 %	75-125							
Surr: 1,2-DCA-d4	88.5 %	75-125							
Surr: Dibromofluoromethane	104 %	75-125							
Surr: Toluene-d8	99.0 %	75-125							

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 2109()

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF09SW (P1G1016-02) Water					Sampled: 07/2	7/01 Recei	ved: 07/31/0	01	
Acetone	ND	25.0	ug/l	1	EPA 8260B	08/04/01	08/04/01	1081014	
Benzene	ND	1.00	"	п	ŧI	li .	H	н	
Bromobenzene	ND	1.00	11	**	11	tt	11	**	
Bromochloromethane	ND	1.00	19	11	n	#1	11	n	
Bromodichloromethane	ND	1.00	**	**		17	11	11	
Bromoform	ND	1.00	**	**	**	ıı	"	11	
Bromomethane	ND	5.00	**	n	"	ri .	11	11	
2-Butanone	ND	10.0	u	п	,,	11	11	11	
n-Butylbenzene	ND	5.00	**	11	#	,,	11	н	
sec-Butylbenzene	ND	1.00	11	17		**	11	17	
tert-Butylbenzene	ND	1.00	H	IT	**	11	11	"	
Carbon disulfide	ND	10.0	11	"	**	n	**	,,	
Carbon tetrachloride	ND	1.00		**	**	11	,,	11	
Chlorobenzene	ND	1.00	u	"	п	н	It	11	
Chloroethane	ND	1.00	"	**	11	11	"	n	
Chloroform	ND	1.00	,,	**	11	n	n	,,	
Chloromethane	ND	5.00	**	"	n.	п	**	11	
2-Chlorotoluene	ND	1.00	,,	**	n	"	n	"	
4-Chlorotoluene	ND	1.00	11	11	**	"	**	**	
1,2-Dibromo-3-chloropropane	ND	5.00	,,	**	"	tr.	**	**	
Dibromochloromethane	ND	1.00	11	"	u	"	"	**	
1,2-Dibromoethane	ND	1.00	n	11	н	**	,	11	
Dibromomethane	ND	1.00	11	ii	"	0	"	,,	*
1,2-Dichlorobenzene	ND	1.00	11	lt.	,,	"	"	11	
1,3-Dichlorobenzene	ND	1.00	17	n	н	**		Ħ	
1,4-Dichlorobenzene	ND ND	1.00	11	н	n.	II	11	11	
Dichlorodifluoromethane	ND	5.00	*	n	H	**	я	11	
1,1-Dichloroethane	ND	1.00	11	11	"	**	11	11	
1,2-Dichloroethane	ND	1.00	11	*1	н	,	n	*1	
1,1-Dichloroethene	ND	1.00	11	11	11	11		11	
cis-1.2-Dichloroethene	ND	1.00	Ħ	11	n	"	"	"	
trans-1,2-Dichloroethene	ND ND	1.00	"	11	н	"	n	Ħ	
1,2-Dichloropropane	ND	1.00	17	n	n	**	11	11	
1,3-Dichloropropane	ND ND	1.00	n	*1	17	"	Ħ	"	
2,2-Dichloropropane	ND	1.00	11	n	и	Ħ	11	n	
1,1-Dichloropropene	ND ND	1.00	17	*1	н	**	"	n	
cis-1,3-Dichloropropene	ND ND	1.00	n	11	11	"	"	H	
trans-1,3-Dichloropropene	ND	1.00	"	n	,,	"	**		
Ethylbenzene	ND ND	1.00	"	 H		"	,,	"	

North Creek Analytical - Portland



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Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF09SW (P1G1016-02) Water				(Sampled: 07/2	7/01 Recei	ived: 07/31/	01	
Hexachlorobutadiene	ND	2.00	ug/l	1	EPA 8260B	08/04/01	08/04/01	1081014	
2-Hexanone	ND	10.0	"	u	11	"	11	**	
Isopropylbenzene	ND	2.00	н	II.	В	11	ti	**	
p-Isopropyltoluene	ND	2.00	**	п	**	n	**	11	
4-Methyl-2-pentanone	ND	5.00	н	. 16	и	11	n	**	
Methyl tert-butyl ether	ND	1.00	**	n	Ħ	n	11	Ħ	
Methylene chloride	ND	5.00	"	n	**	11	n	**	
Naphthalene	ND	2.00	н	Ħ	n	tt	**	u	
n-Propylbenzene	ND	1.00	**	**	11	11	11	n	
Styrene	ND	1.00	11	n	n	n	Ħ	н	
1,1,1,2-Tetrachloroethane	ND	1.00	31	11	. 11	**	Ħ	11	
1,1,2,2-Tetrachloroethane	ND	1.00	н .	n	11	**	H	n	
Tetrachloroethene	ND	1.00	11	n	11	"	ti .	**	
Toluene	ND	1.00	11	**	"	n	**	**	
1,2,3-Trichlorobenzene	ND	1.00	Ħ	н	11	ıı	**	н	
1,2,4-Trichlorobenzene	ND	1.00	Ħ	lf.	**	n	**	π	
1,1,1-Trichloroethane	ND	1.00	**	"	**	11	Ħ	11	
1,1,2-Trichloroethane	ND	1.00	#	H	tt	n	n	и	
Trichloroethene	ND	1.00	14	11	n	**	11	11	
Trichlorofluoromethane	ND	1.00	н	11	P	n	17	**	
1,2,3-Trichloropropane	ND	1.00	Ħ	11	и	11	n	"	
1,2,4-Trimethylbenzene	ND	1.00	11	н	11	**	**	н	
1,3,5-Trimethylbenzene	ND	1.00	**	11	"	n	11	n	
Vinyl chloride	ND	1.00	н	н	**	**	11	Ħ	
o-Xylene	ND	1.00	11	ıı	19	11	Ħ	"	
m,p-Xylene	ND	2.00	H	п	"	#	11	11	
Surr: 4-BFB	104 %	75-125							
Surr: 1,2-DCA-d4	90.0 %	75-125							
Surr: Dibromofluoromethane	105 %	75-125							
Surr: Toluene-d8	100 %	75-125							

North Creek Analytical - Portland





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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF10SW (P1G1016-03) Water				(Sampled: 07/2	7/01 Rece	ived: 07/31/0	01	
Acetone	ND	25.0	ug/l	1	EPA 8260B	08/04/01	08/04/01	1081014	
Benzene	ND	1.00	**	ø	H	n	ır	"	
Bromobenzene	ND	1.00	**	"	"	Ħ	tt	11	
Bromochloromethane	ND	1.00	**	ŧ	**	II.	**	n	
Bromodichloromethane	ND	1.00	**	It.	n	Ħ	11	n	
Bromoform	ND	1.00	H	**	11	"	н	н	
Bromomethane	ND	5.00	**	**	,,	st	n	n	
2-Butanone	ND	10.0	**	"	*	**	**	н	
n-Butylbenzene	ND	5.00	**	"	,,	"	ıı .	Ħ	
sec-Butylbenzene	ND	1.00	11	n		n	"	n	
tert-Butylbenzene	ND	1.00	**	11	"	**	"	n	
Carbon disulfide	ND	10.0	11	ห	11	Ħ	**		
Carbon tetrachloride	ND	1.00	11	it	11	"	11	Ħ	,
Chlorobenzene	ND	1.00	"	**	н	11	11	"	
Chloroethane	ND	1.00	**	**	19	11	11	**	
Chloroform	ND	1.00	H	"	н	"	н	n	
Chloromethane	ND	5.00	#	**	"	11	"	п	
2-Chlorotoluene	ND	1.00	n	,	"	u	ŧi	n	
4-Chlorotoluene	ND	1.00	n	ti	11	н	u u	n	
1,2-Dibromo-3-chloropropane	ND	5.00	11	ı	**	"	*1	"	
Dibromochloromethane	ND	1.00	11	**	**	"	"	n	
1,2-Dibromoethane	ND	1.00	**	19	**	n	н	11	
Dibromomethane	ND	1.00	**	n	**	11	"	11	
1,2-Dichlorobenzene	ND	1.00	11	11	11	11	n	11	
1,3-Dichlorobenzene	ND	1.00	п	n	11	"	11	11	
1,4-Dichlorobenzene	ND	1.00	Ħ	11		**	u	н	
Dichlorodifluoromethane	ND	5.00	н	n	"	**	11	n	
1,1-Dichloroethane	ND	1.00	**	**	"	11	IJ	Ħ	
1,2-Dichloroethane	ND	1.00	"	11	"	**	#	11	
1,1-Dichloroethene	ND	1.00	**	H	"	11	u	11	
cis-1,2-Dichloroethene	ND	1.00	11	19		n	n	н	
trans-1,2-Dichloroethene	ND	1.00	11	. "	"	"	"	11	
1,2-Dichloropropane	ND	1.00	11	Ħ	и	II	H	11	
1,3-Dichloropropane	ND	1.00	n	H	"	"	11	n	
2,2-Dichloropropane	ND	1.00	Ħ	n	n	n	11	17	
1,1-Dichloropropene	ND	1.00	"	n	"	Ħ	11	н	
cis-1,3-Dichloropropene	ND	1.00	**	11	8	n	Ħ	" .	
trans-1,3-Dichloropropene	ND	1.00	11	Ħ	n	11	"	#	
Ethylbenzene	ND	1.00	п	n	"	11	11	н	

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka
Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF10SW (P1G1016-03) Water					Sampled: 07/2	7/01 Rece	ived: 07/31/0	01	
Hexachlorobutadiene	ND	2.00	ug/l	1	EPA 8260B	08/04/01	08/04/01	1081014	
2-Hexanone	ND	10.0	n	**		#	**	11	
Isopropylbenzene	ND	2.00	**	H	n	"	11	11	
p-Isopropyltoluene	ND	2.00	**	n	n	**	11	**	
4-Methyl-2-pentanone	ND	5.00	"	11	u	11	11	n	
Methyl tert-butyl ether	ND	1.00	11	If	at	n	ti .	n	
Methylene chloride	ND	5.00	**	11	**	17	TP	11	
Naphthalene	ND	2.00	n	H	**	n	**	**	
n-Propylbenzene	ND	1.00	"	*	u	n	**	11	
Styrene	ND	1.00	**	,,	11	li,	ıı	Ħ	
1,1,1.2-Tetrachloroethane	ND	1.00	**	н	н	Ħ	11	11	
1,1,2,2-Tetrachloroethane	ND	1.00	10	п	n	11	n	u	
Tetrachloroethene	ND	1.00	11	н	**	II	n	n	
Toluene	ND	1.00	н	**	n	11	11	lt .	
1,2,3-Trichlorobenzene	ND	1.00	n	**	tt	Ħ	i)	n	
1,2.4-Trichlorobenzene	ND	1.00	11	**	11	**	"	11	
1.1,1-Trichloroethane	ND	1.00	11	**	11	**	"	n	
1,1,2-Trichloroethane	ND	1.00	11	**	11	n	11	**	
Trichloroethene	ND	1.00	**	11	**	#	11	11	
Trichlorofluoromethane	ND	1.00	H	19	11	n	11	n	
1,2,3-Trichloropropane	ND	1.00	н	H	n	**	u	n	
1,2,4-Trimethylbenzene	ND	1.00	R	11	39	IT	tt	11	
1,3,5-Trimethylbenzene	ND	1.00	o o	н	11	n	n	н	
Vinyl chloride	ND	1.00	и	Ħ	**	**	**	"	
o-Xylene	ND	1.00	ır	**	**	,,	"	n	
m,p-Xylene	ND	2.00	n	н	11	n	Ħ	11	
Surr: 4-BFB	105 %	75-125			,				
Surr: 1,2-DCA-d4	91.0 %	75-125							
Surr: Dibromofluoromethane	106 %	75-125							
Surr: Toluene-d8	102 %	75-125							

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

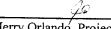
Project Number: 21090 Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF11SW (P1G1016-04) Water				5	Sampled: 07/2	7/01 Recei	ived: 07/31/0	01	·
Acetone	ND	25.0	ug/l	1	EPA 8260B	08/04/01	08/04/01	1081014	
Benzene	ND	1.00	"	4	"	#	11	1001014	
Bromobenzene	ND	1.00	н	**	19	Ħ	**	"	
Bromochloromethane	ND	1.00	**	"	н	11		,	
Bromodichloromethane	ND	1.00	**	**	п	**	11	"	
Bromoform	ND	1.00	11	"	**	n	11	"	
Bromomethane	ND	5.00	"	,,	17	H	11	**	
2-Butanone	ND	10.0	11	.,	17	"	**	#	
n-Butylbenzene	ND	5.00	n		11	n	11	11	
sec-Butylbenzene	ND	1.00	n	n	"	"	H	**	
tert-Butylbenzene	ND	1.00	11	*	11		**	11	
Carbon disulfide	ND	10.0	и	11	"	**	**	**	
Carbon tetrachloride	ND	1.00	11	н	**	n	11	11	
Chlorobenzene	ND	1.00		и	11	11	n	п	
Chloroethane	ND	1.00	"	n	**	п	**	11	
Chloroform	ND	1.00	n	11	n	**	**	11	
Chloromethane	ND	5.00	n	"		**	H	,,	
2-Chlorotoluene	ND	1.00	"	н	11	n	n	,,	
4-Chlorotoluene	ND	1.00	11	н	н	H	**	n	
1,2-Dibromo-3-chloropropane	ND	5.00	Ħ	*	н	*	"	,	
Dibromochloromethane	ND	1.00	**	11	11	Ħ	11	"	
1.2-Dibromoethane	ND	1.00	11	**	11	#	"	u	
Dibromomethane	ND	1.00	11	"	n	"	11	11	
1,2-Dichlorobenzene	ND	1.00	n	п	n	11	н	ŧı	
1,3-Dichlorobenzene	ND	1.00	11	n	"	n	n	11	
1,4-Dichlorobenzene	ND	1.00	"	11	"	11	17	11	
Dichlorodifluoromethane	ND	5.00	**	n	"	#	11	11	
1,1-Dichloroethane	ND	1.00	"	19	"	**	"	н '	
1,2-Dichloroethane	ND	1.00	**	H	"	11	n	n	
1,1-Dichloroethene	ND	1.00	**	**	ņ		"	11	
cis-1,2-Dichloroethene	ND	1.00	11	11	н	n	"	n	
trans-1,2-Dichloroethene	ND	1.00	•	**	11	Ħ	н	**	
1,2-Dichloropropane	ND	1.00	"	17	n	n	*1	H	
1,3-Dichloropropane	ND	1.00	**	n	"	n	"	"	
2,2-Dichloropropane	ND	1.00	**	Ħ	"	11	**	"	
1,1-Dichloropropene	ND	1.00	**	"	11	**	n	n	
cis-1,3-Dichloropropene	ND	1.00	"	11	**	n	11	n	
trans-1,3-Dichloropropene	ND	1.00	n	n	"	11	**	Ħ	
Ethylbenzene	ND	1.00	11	n	**	n	**	11	

North Creek Analytical - Portland





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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 21090 Project Manager: Anne Kranawetter **Amended Report** Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF11SW (P1G1016-04) Water				Ç	Sampled: 07/2	7/01 Recei	ived: 07/31/0	01	
Hexachlorobutadiene	ND	2.00	ug/l	1	EPA 8260B	08/04/01	08/04/01	1081014	
2-Hexanone	ND	10.0	11	rt	**	91	"	0	
Isopropylbenzene	ND	2.00	u	11	**	"	R	17	
p-Isopropyltoluene	ND	2.00	11	n	"	Ħ	11	**	
4-Methyl-2-pentanone	ND	5.00	11	It	11	**	11	Ħ	
Methyl tert-butyl ether	ND	1.00	*1	"	**	**	11	**	
Methylene chloride	ND	5.00	11	n	11	Ħ	Ħ	11	
Naphthalene	ND	2.00	11	n .	17	Ħ	11	11	
n-Propylbenzene	ND	1.00	11	u	ti.	n	**	н	
Styrene	ND	1.00	н	11	H	п		n	
1,1,1,2-Tetrachloroethane	ND	1.00	11	н	и .	tt	11	**	
1,1,2,2-Tetrachloroethane	ND	1.00		#	11	Ħ	11	n	
Tetrachloroethene	ND	1.00	**	"	"	**	н	u	
Toluene	ND	1.00	**	"	Ħ	и	11	**	
1,2,3-Trichlorobenzene	ND	1.00	n	n	n .	11	н	"	
1,2,4-Trichlorobenzene	ND	1.00	11	n	ıı	11	Ħ	n	
1,1,1-Trichloroethane	ND	1.00	"	11	11	H	11	н	
1,1,2-Trichloroethane	ND	1.00	**	v	"	u	Ħ	н	
Trichloroethene	ND	1.00	**	**	"	"	11	**	
Trichlorofluoromethane	ND	1.00	н	11	**	"	11	"	
1,2,3-Trichloropropane	ND	1.00	11	n	m	n	11	"	
1,2,4-Trimethylbenzene	ND	1.00	н	"	11	ır	Ħ	n	
1,3,5-Trimethylbenzene	ND	1.00	Ħ	н	n	"	#	н	
Vinyl chloride	ND	1.00	51	Ħ	n	"	11	71	
o-Xylene	ND	1.00	11	11	Ħ	n	ч	"	
m,p-Xylene	ND	2.00	н		"	#		Ħ	
Surr: 4-BFB	104 %	75-125							
Surr: 1,2-DCA-d4	88.5 %	75-125							
Surr: Dibromofluoromethane	106 %	75-125							
Surr: Toluene-d8	98.0 %	75-125							

North Creek Analytical - Portland

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Bristol Environmental & Engineering

2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF12SW (P1G1016-05) Water									2 10100
					Sampled: 07/2		ived: 07/31/0		
Acetone	ND	25.0	ug/l	1	EPA 8260B	08/04/01	08/04/01	1081014	
Benzene	ND	1.00	**	"	"	ш	**	11	
Bromobenzene	ND	1.00	W	11	"	11	"	11	
Bromochloromethane	ND	1.00	n	"	n	r	"	11	
Bromodichloromethane	ND	1.00	11	Ħ	**	**	**	IT.	
Bromoform	ND	1.00	19	н	Ħ	**	#1	н	
Bromomethane	ND	5.00	н	"	11	"	,,	n	
2-Butanone	ND	10.0	"	n	n	n	11	"	
n-Butylbenzene	ND	5.00	u	n	н	"	**	11	
sec-Butylbenzene	ND	1.00	11	0	"	ir .	u u	II .	
tert-Butylbenzene	ND	1.00	17	11	11	**	11	Ħ	
Carbon disulfide	ND	10.0	n	H	11	"	И	11	
Carbon tetrachloride	ND	1.00	11	11	11	11	11	**	
Chlorobenzene	ND	1.00	11	п	II.	n	н	**	
Chloroethane	ND	1.00	**	11	11	н	"	H	
Chloroform	ND	1.00	17	"	"	11	н	**	
Chloromethane	ND	5.00	**	71	11	**	11	n	
2-Chlorotoluene	ND	1.00	11	11	11	н .	**	11	
4-Chlorotoluene	ND	1.00	11	ir	**	ti .	**	n	
1,2-Dibromo-3-chloropropane	ND	5.00	n	11	n	н	11	11	
Dibromochloromethane	ND	1.00	n	н	n	11	H.	n	
1,2-Dibromoethane	ND	1.00	11	н	**	n	11	,,	
Dibromomethane	ND	1.00	51	17	н	*1	11	19	
1,2-Dichlorobenzene	ND	1.00	.,	11	"	11	н	"	
			"	11	"	n	11	,,	
1,3-Dichlorobenzene	ND ND	1.00	,,		,,	n	U	"	
1,4-Dichlorobenzene Dichlorodifluoromethane		1.00	,,	,,	,,	11	,,		
	ND	5.00		"			11	,	
1,1-Dichloroethane	ND	1.00	"	,,				. "	
1,2-Dichloroethane	ND	1.00		"	. "	,,	*		
1,1-Dichloroethene	ND	1.00	" "				,,	"	
cis-1,2-Dichloroethene	ND	1.00	"	".	,,	,,		"	
trans-1,2-Dichloroethene	ND	1.00			"	"	,,	,,	
1,2-Dichloropropane	ND	1.00	н	,					
1,3-Dichloropropane	ND	1.00	11	n	"	TI .	N	"	
2,2-Dichloropropane	ND	1.00	19	H	Ħ	n	п	**	
1,1-Dichloropropene	ND	1.00	n	11	"	**	17	н	
cis-1,3-Dichloropropene	ND	1.00	11	11	71	H	Ħ	11	
trans-1,3-Dichloropropene	ND	1.00	17	"	**	ш	"	11	
Ethylbenzene	ND	1.00	"	11	н	11	17	"	

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF12SW (P1G1016-05) Water				5	Sampled: 07/2	7/01 Recei	ived: 07/31/6	01	
Hexachlorobutadiene	ND	2.00	ug/l	1	EPA 8260B	08/04/01	08/04/01	1081014	
2-Hexanone	ND	10.0	11	**	**	n	11	"	
Isopropylbenzene	ND .	2.00	Ħ	"	11	H	11	19	
p-Isopropyltoluene	ND	2.00	11	"	n	n	**	n	
4-Methyl-2-pentanone	ND	5.00	11			n	11	*	
Methyl tert-butyl ether	ND	1.00	n	"	n	11	11	n	
Methylene chloride	ND	5.00	11	"	n	11	11	**	
Naphthalene	ND	2.00	n	11	71	"	**	**	
n-Propylbenzene	ND	1.00	n	u	н	it	**	11	
Styrene	ND	1.00	**	n	II.	n	**	11	
1,1,1,2-Tetrachloroethane	ND	1.00	**	r	19	**	11	11	
1,1,2,2-Tetrachloroethane	ND	1.00	**	11	u	11	11	n	
Tetrachloroethene	ND	1.00	19	п	н	"	11	**	
Toluene	ND	1.00	**	n	11	"	**	n	
1,2,3-Trichlorobenzene	ND	1.00	"	n	ıı	а	11	11	
1,2,4-Trichlorobenzene	ND	1.00	n	n	n	11	11	"	
1,1,1-Trichloroethane	ND	1.00	**	"	17	11	**	n	
1,1,2-Trichloroethane	ND	1.00	11	11	n	11	n	**	
Trichloroethene	ND	1.00	**	"	n	17	н :	11	
Trichlorofluoromethane	ND	1.00	P	н	и	11	**	н .	
1,2,3-Trichloropropane	ND	1.00	"	н	**	u	"	· a	
1,2,4-Trimethylbenzene	ND	1.00	n	11	n	11	*	11	
1,3,5-Trimethylbenzene	ND	1.00		11	"	**	11	u	
Vinyl chloride	ND	1.00	17	11	**	11	11	n	
o-Xylene	ND	1.00	"	11	**	"	H	11	
m,p-Xylene	ND	2.00	**	11	. "	n	u	11	
Surr: 4-BFB	101 %	75-125							
Surr: 1,2-DCA-d4	88.5 %	75-125							
Surr: Dibromofluoromethane	106 %	75-125							
Surr: Toluene-d8	100 %	75-125							

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF13SW (P1G1016-06) Water				Ś	Sampled: 07/2	7/01 Rece	ived: 07/31/0	01	
Acetone	ND	25.0	ug/l	1	EPA 8260B	08/04/01	08/04/01	1081014	
Benzene	ND	1.00	"	и	Ħ	n	Ħ	n	
Bromobenzene	ND	1.00	**	11	ŧτ	**	tt	11	
Bromochloromethane	ND	1.00	"	н	n	11	17	H	
Bromodichloromethane	ND	1.00	н	**	11	11	ч	11	
Bromoform	ND	1.00	"	n	п	II.	11	n	
Bromomethane	ND	5.00	"	11	"	ıı	n	Ħ	
2-Butanone	ND	10.0	**	11	"	n	11	11	
n-Butylbenzene	ND	5.00	Ħ	н	n	**	п	"	
sec-Butylbenzene	ND	1.00	17	11	Ŋ	n	11	н	
tert-Butylbenzene	ND	1.00	п	**	tt	н		"	
Carbon disulfide	ND	10.0	"	п	11	11	11	n	
Carbon tetrachloride	ND	1.00	**	ır	Ħ	н	"	н	
Chlorobenzene	ND	1.00	11	n		н	11	н	
Chloroethane	ND	1.00	n	**	a	**	11	17	
Chloroform	ND	1.00	**	n	tt.	19	11	n	
Chloromethane	ND	5.00	"	**	n	n	17	11	
2-Chlorotoluene	ND	1.00	*1	11	78	19	**	H	
4-Chlorotoluene	ND	1.00	11	н	"	"	"	п	
1,2-Dibromo-3-chloropropane	ND	5.00	**	11	11	**	. н	11	
Dibromochloromethane	ND	1.00	,,	11	n	ū	11	11	
1,2-Dibromoethane	ND	1.00	11	11	"	11	H	11	
Dibromomethane	ND	1.00	17	n		11	11	11	
1.2-Dichlorobenzene	ND	1.00	"	н	**	71	H	11	
1,3-Dichlorobenzene	ND	1.00	11	11	11	u	n	n	
1,4-Dichlorobenzene	ND	1.00	11	**	n	11	"	п	
Dichlorodifluoromethane	ND	5.00	,,	it	n	ŧ	H	11	
1,1-Dichloroethane	ND	1.00	н	H	IT	н	**	**	
1.2-Dichloroethane	ND	1.00	**	11	#	н	"	11	
1,1-Dichloroethene	ND	1.00	H	н		Ħ	**	11	
cis-1.2-Dichloroethene	ND	1.00	Ħ	"	11	**	**	"	
trans-1,2-Dichloroethene	ND	1.00	"	11	н	**	11	"	
1,2-Dichloropropane	ND	1.00	н	11	и	**	п	"	
1,3-Dichloropropane	ND	1.00	11	Ħ	n	"	11	11	
2,2-Dichloropropane	ND	1.00	n	**	*1	"	"	**	
1,1-Dichloropropene	ND	1.00	**	D.	**	п	**	н	
cis-1,3-Dichloropropene	ND	1.00	11	**	"	n	II.	11	
trans-1,3-Dichloropropene	ND	1.00	11	n	17	17	"	It	
Ethylbenzene	ND	1.00	11	n	Ħ	n	"	II.	

North Creek Analytical - Portland

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North Creek Analytical, Inc. Environmental Laboratory Network Page 17 of 43



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF13SW (P1G1016-06) Water				(Sampled: 07/2	7/01 Recei	ived: 07/31/0	01	
Hexachlorobutadiene	ND	2.00	ug/l	1	EPA 8260B	08/04/01	08/04/01	1081014	
2-Hexanone	ND	10.0	"	н	71	"	11	"	
Isopropylbenzene	ND	2.00	**	n	11	n	. "	н	
p-Isopropyltoluene	ND	2.00	**	11	"	"	11	11	
4-Methyl-2-pentanone	ND	5.00	n	n	11	11	n	н	
Methyl tert-butyl ether	ND	1.00	n	"	**	11	**		
Methylene chloride	ND	5.00	"	n		n	**	11	
Naphthalene	ND	2.00	н	*11	11	**	17	11	
n-Propylbenzene	ND	1.00	н	It	н	"	Ħ	н	
Styrene	ND	1.00	и	(1	11		**	11	
1,1,1,2-Tetrachloroethane	ND	1.00	**	11	n	9	,,	er	
1,1,2,2-Tetrachloroethane	ND	1.00	"	п	tt	n	*1	17	
Tetrachloroethene	ND	1.00	н	n	n .		11	**	
Toluene	ND	1.00	11	11	11	11	и	**	
1,2,3-Trichlorobenzene	ND	1.00	"	n	11	H	11	**	
1,2,4-Trichlorobenzene	ND	1.00	**	H	n	ti	11	"	
1,1,1-Trichloroethane	ND	1.00	**	n	n		"	"	
1,1,2-Trichloroethane	ND	1.00	**	н	n	"	Ħ	"	
Trichloroethene	ND	1.00	rr	11	11	**	ıı	"	
Trichlorofluoromethane	ND	1.00	ıı	u	n	n	11	,,	
1,2,3-Trichloropropane	ND	1.00	п	11	11	It	"	**	
1,2,4-Trimethylbenzene	ND	1.00	"	и	н	Ħ	11	n	
1,3,5-Trimethylbenzene	ND	1.00	11	11	11	11	n	н	
Vinyl chloride	ND	1.00	11	11	**	11		н	
o-Xylene	ND	1.00	"	11	11	11	n	u	
m,p-Xylene	ND	2.00	11	н	11	11	n	"	
Surr: 4-BFB	100 %	75-125							
Surr: 1,2-DCA-d4	91.5 %	75-125							
Surr: Dibromofluoromethane	104 %	75-125							
Surr: Toluene-d8	99.0 %	75-125							

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF14SW (P1G1016-07) Water				Ş	Sampled: 07/2	7/01 Recei	ved: 07/31/	01	
Acetone	ND	25.0	ug/l	1	EPA 8260B	08/04/01	Ó8/04/01	1081014	
Benzene	ND	1.00	"	11	Ħ	Ħ	11	91	
Bromobenzene	ND	1.00	11	JI .	11	n	Ħ	,,	
Bromochloromethane	ND	1.00	"	11	11	11	Ħ	**	
Bromodichloromethane	ND	1.00	"	**	"	н	Ħ	"	
Bromoform	ND	1.00	**	ıı	**	n	19	**	
Bromomethane	ND	5.00	n	"	11	n	17	"	
2-Butanone	ND	10.0	"	"	n	n	11	n	
n-Butylbenzene	ND	5.00	"	"	n	11	11	11	
sec-Butylbenzene	ND	1.00	n	"	"	H	11	n	
tert-Butylbenzene	ND	1.00	11	19	**	"	17	п	
Carbon disulfide	ND	10.0	11	11	"	•	н	n	
Carbon tetrachloride	ND	1.00	**	H	"	*	**	п	
Chlorobenzene	ND	1.00	"	ш	11	n	Ħ	II .	
Chloroethane	ND	1.00	**	**	**	н	"	**	
Chloroform	ND	1.00	D	11	n	n	**	n	
Chloromethane	ND	5.00	11	н	**	n	11	н	
2-Chlorotoluene	ND	1.00	n	"	tt	n	"	n	
4-Chlorotoluene	ND	1.00	н	**	**	n	"	τι	
1,2-Dibromo-3-chloropropane	ND	5.00	11	11	**	"	H	n	
Dibromochloromethane	ND	1.00	11	и	**	n	tt	н	
1,2-Dibromoethane	ND	1.00	н	"	**	11	71	It	
Dibromomethane	ND	1.00	и	U	"	и	**	lr .	
1,2-Dichlorobenzene	ND	1.00	n	н	**	n	11	**	
1,3-Dichlorobenzene	ND	1.00	**	11	11	**	n	п	
1,4-Dichlorobenzene	ND	1.00	17	11	Ħ	н	n	n	
Dichlorodifluoromethane	ND	5.00	**	17	n	11	n	•	
1,1-Dichloroethane	ND	1.00	"	"	**	"	"	**	
1,2-Dichloroethane	ND	1.00	**	n	п	11	11	н	
1,1-Dichloroethene	ND	1.00	11	"	n	11	Ħ	II .	
cis-1,2-Dichloroethene	ND	1.00	u	n	19	#		n	
trans-1,2-Dichloroethene	ND	1.00	"	11	"	**	н	"	
1,2-Dichloropropane	ND	1.00	n	n	"	**	n	11	
1,3-Dichloropropane	ND	1.00	H	11	**	н	11	II	
2,2-Dichloropropane	ND	1.00	n.	ıı	n	11	n	н	
1,1-Dichloropropene	ND	1.00	11	11	**	н	н	11	
cis-1,3-Dichloropropene	ND	1.00	п	n	**	n	17	ır	
trans-1,3-Dichloropropene	ND	1.00	"	n	"	п	n	n	
Ethylbenzene	ND	1.00	+1	11	п	11	17	н	

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka
Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMMF14SW (P1G1016-07) Water					Sampled: 07/2	7/01 Rece	ived: 07/31/	01	<u>.</u>
Hexachlorobutadiene	ND	2.00	ug/l	. 1	EPA 8260B	08/04/01	08/04/01	1081014	
2-Hexanone	ND	10.0	"	H	"	#	11	"	
Isopropylbenzene	ND	2.00	11	**	11	11	11	21	
p-Isopropyltoluene	ND	2.00	**	**	11	11	11	**	
4-Methyl-2-pentanone	ND	5.00	11	17	**	н	tt	**	
Methyl tert-butyl ether	ND	1.00	n	n	**	tt	**	•	
Methylene chloride	ND	5.00	**	11	at .	11	**	,,	
Naphthalene	ND	2.00	17	"	11	11	**	11	
n-Propylbenzene	ND	1.00	11	"	n	Ħ	Ħ	11	
Styrene	ND	1.00	**	"	**	,,	"	Ħ	
1.1,1,2-Tetrachloroethane	ND	1.00	11	н	n	11			
1,1,2,2-Tetrachloroethane	ND	1.00	•	11	"	"	**	**	
Tetrachloroethene	ND	1,00	**	u	**	n	**	11	
Toluene	ND	1.00	17	"	n	n	n	п	
1,2,3-Trichlorobenzene	ND	1.00	11	н	н	tt	n	**	
1,2,4-Trichlorobenzene	ND	1.00	**	n	11	11	11		
1,1,1-Trichloroethane	ND	1.00	11	n	n	11	n	п	
1,1,2-Trichloroethane	ND	1.00	ti	Ħ	Ħ	11	**	"	
Trichloroethene	ND	1.00	ti	н	11	11	n	19	
Trichlorofluoromethane	ND	1.00	17	n	**	*	n	Ħ	
1,2,3-Trichloropropane	ND	1.00		11	н		11	и	
1,2,4-Trimethylbenzene	ND	1.00	**	n	17	**	11	rt .	
1,3,5-Trimethylbenzene	ND	1.00	**	"	**	**	"	н	
Vinyl chloride	ND	1.00	u	11	Ħ	n	н	н	
o-Xylene	ND	1.00	n	"	11	**	н	11	
m,p-Xylene	ND	2.00	n	ıı	11	n	11	Ħ	
Surr: 4-BFB	105 %	75-125							
Surr: 1,2-DCA-d4	91.0 %	75-125							
Surr: Dibromofluoromethane	110 %	75-125							
Surr: Toluene-d8	102 %	75-125							

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

		iii Creek	Analyt	1041-10	- Hanu				
Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF15SW (P1G1016-08) Water				5	Sampled: 07/2	7/01 Recei	ived: 07/31/	01	
Acetone	ND	25.0	ug/l	1	EPA 8260B	08/04/01	08/04/01	1081014	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Benzene	ND	1.00	"	11	"	#	"	1001014	
Bromobenzene	ND	1.00	**	π	11	**	11	n	
Bromochloromethane	ND	1.00	"	u	п	n	Ħ	n	
Bromodichloromethane	ND	1.00	**	"		H.	n	н	
Bromoform	ND	1.00	n.	н	11	11	tt.	**	
Bromomethane	ND	5.00	n	**	11	**	n	н	
2-Butanone	ND	10.0	n	n	II.	"	**	н	
n-Butylbenzene	ND	5.00	n	"	n	"	**	n	
sec-Butylbenzene	ND	1.00	н	"	"		**	n	
tert-Butylbenzene	ND	1.00	**	n	н	"		n	
Carbon disulfide	ND	10.0	11	и	п	**	"	Ħ	
Carbon tetrachloride	ND	1.00	**	11	n,	11	п	11	
Chlorobenzene	ND	1.00	11	н	n	11	"	11	
Chloroethane	ND	1.00	11	11	**	ı,	11	n	
Chloroform	1.06	1.00	,,	Ħ	н	11	Ħ	н	
Chloromethane	ND	5.00	11	**	н	**	11	н	
2-Chlorotoluene	ND	1.00	н	11	(1	**	11	н	
4-Chlorotoluene	ND	1.00	11	11	11	"	"		
1,2-Dibromo-3-chloropropane	ND	5.00	**	**	11	**	11	11	
Dibromochloromethane	ND	1.00	11	ır	11	11	n	11	
1.2-Dibromoethane	ND	1.00	"	n	H	н	"	**	
Dibromomethane	ND	1.00	**	**	н	"	#	**	
1,2-Dichlorobenzene	ND	1.00	**	11	n	n	11		
1,3-Dichlorobenzene	ND	1,00	**	16	11	n	11	н	
1,4-Dichlorobenzene	ND	1.00	"	**	"	11	"	п	
Dichlorodifluoromethane	ND	5.00	**	"	"	n	tı	n	
1,1-Dichloroethane	ND	1.00	11	н	n	**	н	n	
1,2-Dichloroethane	ND	1.00	11	"		**		16	
1,1-Dichloroethene	ND	1.00	11	ıı	n	17	н	11	
cis-1,2-Dichloroethene	ND	1.00	11	"	n	11	**	#	
trans-1,2-Dichloroethene	ND	1.00	н	**	11	0	n	н	
1,2-Dichloropropane	ND	1.00	11	"	11	n	"	"	
1,3-Dichloropropane	ND	1.00	11	"	**	"	"	"	
2,2-Dichloropropane	ND	1.00	в	**	11	u	n	#	
1,1-Dichloropropene	ND	1.00	**	п	н	**	n	"	
cis-1,3-Dichloropropene	ND	1.00	11	"		"	**	n	
trans-1,3-Dichloropropene	ND	1.00	n	**		"	11	4	
Ethylbenzene	ND	1.00	"	u	n	**	11	**	

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Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF15SW (P1G1016-08) Water				Ş	Sampled: 07/2	7/01 Recei	ived: 07/31/0	01	
Hexachlorobutadiene	ND	2.00	ug/I	1	EPA 8260B	08/04/01	08/04/01	1081014	
2-Hexanone	ND	10.0	11	n	**	н	"	"	
Isopropylbenzene	ND	2.00	"	"	11	II .	n		
p-Isopropyltoluene	ND	2.00	11	**	"	u	H		
4-Methyl-2-pentanone	ND	5.00	11	**	n	11	н	n	
Methyl tert-butyl ether	ND	1.00	**	rı .	**	11	n	**	
Methylene chloride	ND	5.00	11	n	n	n	H	"	
Naphthalene	ND	2.00	17	ų	Ħ	n	11	"	
n-Propylbenzene	ND	1.00	**	н	11	**		"	
Styrene	ND	1.00	**	n	#	н	11	"	
1,1,1,2-Tetrachloroethane	ND	1.00		н	**	H	11	н	
1,1,2,2-Tetrachloroethane	ND	1.00	**		11	,,	"	**	
Tetrachloroethene	ND	1.00	**	11	п	н	11	n	
Toluene	6.61	1.00	11	n	п	**	,,	11	
1,2,3-Trichlorobenzene	ND	1.00	н	n	w	n	**	11	
1,2,4-Trichlorobenzene	ND	1.00	*	n	11	u u	"	н	
1,1,1-Trichloroethane	ND	1.00	11	**	n	11	11	н	
1,1,2-Trichloroethane	ND	1.00	n	**	n	11	#	н	
Trichloroethene	ND	1.00	п	11	ıı	11	11	11	
Trichlorofluoromethane	ND	1.00	н	н	Ħ	n	11	n	
1,2,3-Trichloropropane	ND	1.00	11	н	n	ti	11	H	
1,2,4-Trimethylbenzene	ND	1.00	11	19	н	**	11	**	
1,3,5-Trimethylbenzene	ND	1.00	41	н	н	"	11	51*	
Vinyl chloride	ND	1.00	"	п	н	n	17	н	
o-Xylene	ND	1.00	u	n	***	n	n	Ħ	
m,p-Xylene	ND	2.00	ŧı	17	н	n	11	Ħ	
Surr: 4-BFB	102 %	75-125							
Surr: 1,2-DCA-d4	92.0 %	75-125							
Surr: Dibromofluoromethane	107 %	75-125							
Surr: Toluene-d8	99.5 %	75-125							

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Conventional Chemistry Parameters per APHA/EPA Methods North Creek Analytical - Portland

Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/03/01 1080916 Chemical Oxygen Demand 46.3 5.00 " " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 103 10.0 " " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen 1.27 0.500 " " EPA 351.2 08/01/01 08/02/01 1080886 Total Organic Carbon 13.1 1.00 " " EPA 415.1 07/30/01 08/04/01 1071851 01AMMF09SW (P1G1016-02) Water	Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 08/01/01 1080916 1 1080916 Chemical Oxygen Demand 46.3 5.00 " EPA 410.4 08/03/01 08/03/01 08/03/01 1080976 1 1080916 1 1080916 Total Dissolved Solids 103 10.0 " EPA 410.1 08/02/01 08/03/01 08/03/01 1080928 1 1080916 1 1080916 Total Organic Carbon 13.1 1.00 " EPA 415.1 07/30/01 08/03/01 08/03/01 1080928 1 1080916	01AMMF08SW (P1G1016-01) Water					Sampled: 07/2	7/01 Recei	ived: 07/31/0	01	
Chemical Oxygen Demand	Ammonia-Nitrogen	ND	0.0500	mg/l	1	EPA 350 1				
Total Dissolved Solids	Chemical Oxygen Demand	46.3		_						
Total Kjeldahl Nitrogen 1.27 0.500 " EPA 351.2 08/01/01 08/02/01 108/0886 Total Organic Carbon 13.1 1.00 " EPA 415.1 07/30/01 08/04/01 1071851	Total Dissolved Solids	103		11	**					
Total Organic Carbon 13.1 1.00 " EPA 415.1 07/30/01 08/04/01 1071851	Total Kjeldahl Nitrogen	1.27	0.500	71	"					
Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 1080916 Chemical Oxygen Demand 26.5 5.00 " " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 111 10.0 " " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/02/01 1080886 Total Organic Carbon 8.59 1.00 " " EPA 415.1 07/30/01 08/04/01 1071851 O1AMMF10SW (P1G1016-03) Water Sampled: 07/27/01 Received: 07/31/01 Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/03/01 1080976 Total Dissolved Solids 111 10.0 " " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 111 10.0 " " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/03/01 1080928 Total Organic Carbon 8.27 1.00 " " EPA 415.1 07/30/01 08/02/01 08/03/01 1071851 O1AMMF11SW (P1G1016-04) Water Sampled: 07/27/01 Received: 07/31/01 Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/02/01 1080886 Total Organic Carbon 8.27 1.00 " " EPA 410.4 08/03/01 08/08/01 1080928 Total Organic Carbon ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/02/01 1080886 Total Organic Oryz7/01 Received: 07/31/01 Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 1080916 Chemical Oxygen Demand 28.0 5.00 " " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 113 10.0 " " EPA 410.4 08/03/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/03/01 1080928	Total Organic Carbon	13.1		n	Ħ					
Chemical Oxygen Demand 26.5 5.00 " " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 111 10.0 " " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/02/01 1080886 Total Organic Carbon 8.59 1.00 " " EPA 415.1 07/30/01 08/04/01 1071851 Olammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/03/01 08/08/01 1080976 Chemical Oxygen Demand 27.0 5.00 " " EPA 410.4 08/03/01 08/03/01 1080976 Total Dissolved Solids 111 10.0 " " EPA 416.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 415.1 07/30/01 08/02/01 1080886 Total Organic Carbon 8.27 1.00 " " EPA 415.1 07/30/01 08/04/01 1071851 Olammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/02/01 08/08/01 1080886 Total Organic Carbon 8.27 1.00 " " EPA 415.1 07/30/01 08/04/01 1071851 Olammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 08/01/01 1080916 Chemical Oxygen Demand 28.0 5.00 " " EPA 410.4 08/03/01 08/03/01 08/08/01 1080976 Total Dissolved Solids 113 10.0 " " EPA 410.1 08/02/01 08/03/01 1080976 Total Dissolved Solids 113 10.0 " " EPA 410.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 455.2 08/01/01 08/03/01 1080928 Total Dissolved Solids 113 10.0 " " EPA 351.2 08/01/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/03/01 1080886 Total Dissolved Solids 113 10.0 " " EPA 351.2 08/01/01 08/03/01 1080886 Total Nitrogen ND 0.500 " " EPA 351.2 08/01/01 0	01AMMF09SW (P1G1016-02) Water				9	Sampled: 07/2	7/01 Recei	ived: 07/31/0	01	
Chemical Oxygen Demand 26.5 5.00 " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 111 10.0 " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " EPA 351.2 08/01/01 08/02/01 1080886 Total Organic Carbon 8.59 1.00 " EPA 415.1 07/30/01 08/04/01 1071851 OlAMMF10SW (P1G1016-03) Water Sampled: 07/27/01 Received: 07/31/01 Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 1080916 Chemical Oxygen Demand 27.0 5.00 " " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 111 10.0 " " EPA 410.1 08/02/01 08/03/01 1080928 Total Organic Carbon ND 0.500 " " EPA 351.2 08/01/01 08/04/01	Ammonia-Nitrogen	ND	0.0500	mg/l	1	EPA 350.1				
Total Dissolved Solids 111 10.0 " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " EPA 351.2 08/01/01 08/02/01 1080886 Total Organic Carbon 8.59 1.00 " EPA 415.1 07/30/01 08/04/01 1071851 OIAMMF10SW (P1G1016-03) Water Sampled: 07/27/01 Received: 07/31/01 Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 1080916 Chemical Oxygen Demand 27.0 5.00 " " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 111 10.0 " " EPA 351.2 08/01/01 08/02/01 1080886 Total Organic Carbon 8.27 1.00 " " EPA 415.1 07/30/01 08/04/01 1071851 OIAMMF11SW (P1G1016-04) Water Sampled: 07/27/01 Received: 07/31/01	Chemical Oxygen Demand	26.5		_						
Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/02/01 1080886 Total Organic Carbon 8.59 1.00 " " EPA 415.1 07/30/01 08/02/01 1080886 O1AMMF10SW (P1G1016-03) Water Sampled: 07/27/01 Received: 07/31/01 Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 08/01/01 1080916 Chemical Oxygen Demand 27.0 5.00 " " EPA 410.4 08/03/01 08/03/01 08/03/01 1080976 Total Dissolved Solids 111 10.0 " " EPA 160.1 08/02/01 08/03/01 08/03/01 1080928 Total Organic Carbon 8.27 1.00 " EPA 351.2 08/01/01 08/02/01 08/03/01 107(851 O1AMMF11SW (P1G1016-04) Water Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 08/01/01 1080916 Chemical Oxygen Demand 28.0 5.00 " EPA 410.4 08/03/01 08/03/01 08/08/01 1080976 Total Dissolved Solids 113 10.0 " EPA 160.1 08/02/01 08/03/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " EPA 351.2 08/01/01 08/02/01 08/03/01 08/02/01 1080886	Total Dissolved Solids	111	10.0	11	19	EPA 160.1				
Total Organic Carbon 8.59 1.00 " EPA 415.1 07/30/01 08/04/01 1071851	Total Kjeldahl Nitrogen	ND	0.500	11	**	EPA 351.2				
Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 1080916 Chemical Oxygen Demand 27.0 5.00 " " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 111 10.0 " " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/02/01 1080886 Total Organic Carbon 8.27 1.00 " " EPA 415.1 07/30/01 08/04/01 1071851 O1AMMF11SW (P1G1016-04) Water Sampled: 07/27/01 Received: 07/31/01 Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 1080916 Chemical Oxygen Demand 28.0 5.00 " " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 113 10.0 " " EPA 160.1 08/02/01 <th< td=""><td>Total Organic Carbon</td><td>8.59</td><td>1.00</td><td>**</td><td>#</td><td>EPA 415.1</td><td>07/30/01</td><td></td><td></td><td></td></th<>	Total Organic Carbon	8.59	1.00	**	#	EPA 415.1	07/30/01			
Chemical Oxygen Demand 27.0 5.00 " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 111 10.0 " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " EPA 351.2 08/01/01 08/02/01 1080886 Total Organic Carbon 8.27 1.00 " EPA 415.1 07/30/01 08/04/01 1071851 O1AMMF11SW (P1G1016-04) Water Sampled: 07/27/01 Received: 07/31/01 Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 1080916 Chemical Oxygen Demand 28.0 5.00 " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 113 10.0 " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/02/01 1080886	01AMMF10SW (P1G1016-03) Water				,	Sampled: 07/2	7/01 Recei	ived: 07/31/	01	
Chemical Oxygen Demand 27.0 5.00 " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 111 10.0 " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " EPA 351.2 08/01/01 08/02/01 1080886 Total Organic Carbon 8.27 1.00 " EPA 415.1 07/30/01 08/04/01 1071851 O1AMMF11SW (P1G1016-04) Water Sampled: 07/27/01 Received: 07/31/01 Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 1080916 Chemical Oxygen Demand 28.0 5.00 " " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 113 10.0 " " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/02/01 1080886	Ammonia-Nitrogen	ND	0.0500	mg/l	1	EPA 350.1	08/01/01	08/01/01	1080916	
Total Dissolved Solids 111 10.0 " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " EPA 351.2 08/01/01 08/02/01 1080886 Total Organic Carbon 8.27 1.00 " EPA 415.1 07/30/01 08/04/01 1071851 O1AMMF11SW (P1G1016-04) Water Sampled: 07/27/01 Received: 07/31/01 Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 1080916 Chemical Oxygen Demand 28.0 5.00 " " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 113 10.0 " " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/02/01 1080886	Chemical Oxygen Demand	27.0	5.00	_						
Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/02/01 1080886 Total Organic Carbon 8.27 1.00 " " EPA 415.1 07/30/01 08/04/01 1071851 01AMMF11SW (P1G1016-04) Water Sampled: 07/27/01 Received: 07/31/01 Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 1080916 Chemical Oxygen Demand 28.0 5.00 " " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 113 10.0 " " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/02/01 1080886	Total Dissolved Solids	111	10.0	17	11	EPA 160.1				
O1AMMF11SW (P1G1016-04) Water Sampled: 07/27/01 Received: 07/31/01 Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 1080916 Chemical Oxygen Demand 28.0 5.00 " " EPA 410.4 08/03/01 08/03/01 08/08/01 1080976 Total Dissolved Solids 113 10.0 " " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/02/01 1080886	Total Kjeldahl Nitrogen	ND	0.500	n	"	EPA 351.2	08/01/01			
Ammonia-Nitrogen ND 0.0500 mg/l 1 EPA 350.1 08/01/01 08/01/01 1080916 Chemical Oxygen Demand 28.0 5.00 " " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 113 10.0 " " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/02/01 1080886	Total Organic Carbon	8.27	1.00	"	"	EPA 415.1	07/30/01	08/04/01	1071851	
Chemical Oxygen Demand 28.0 5.00 " " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 113 10.0 " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " EPA 351.2 08/01/01 08/02/01 1080886	01AMMF11SW (P1G1016-04) Water				;	Sampled: 07/2	7/01 Recei	ived: 07/31/	01	
Chemical Oxygen Demand 28.0 5.00 " " EPA 410.4 08/03/01 08/08/01 1080976 Total Dissolved Solids 113 10.0 " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " EPA 351.2 08/01/01 08/02/01 1080886	Ammonia-Nitrogen	ND	0.0500	mg/l	1	EPA 350.1	08/01/01	08/01/01	1080916	
Total Dissolved Solids 113 10.0 " " EPA 160.1 08/02/01 08/03/01 1080928 Total Kjeldahl Nitrogen ND 0.500 " EPA 351.2 08/01/01 08/02/01 1080886	Chemical Oxygen Demand	28.0	5.00	-						
Total Kjeldahl Nitrogen ND 0.500 " " EPA 351.2 08/01/01 08/02/01 1080886	• 0			H	"					
	Total Kjeldahl Nitrogen	ND	0.500	tt	"	EPA 351.2				
		9.06		**	H	EPA 415.1	07/30/01	08/04/01	1071851	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Conventional Chemistry Parameters per APHA/EPA Methods North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF12SW (P1G1016-05) Water				S	Sampled: 07/2	7/01 Recei	ived: 07/31/0	01	
Ammonia-Nitrogen	ND	0.0500	mg/l	1	EPA 350.1	08/01/01	08/01/01	1080916	
Chemical Oxygen Demand	32.8	5.00	"	,	EPA 410.4	08/03/01	08/08/01	1080976	
Total Dissolved Solids	106	10.0	**	**	EPA 160.1	08/02/01	08/03/01	1080976	
Total Kjeldahl Nitrogen	ND	0.500	17	"	EPA 351.2	08/01/01	08/02/01	1080928	
Total Organic Carbon	8.73	1.00	n	**	EPA 415.1	07/30/01	08/04/01	1071851	
01AMMF13SW (P1G1016-06) Water				S	Sampled: 07/2	7/01 Recei	ived: 07/31/0	11	
Ammonia-Nitrogen	ND	0.0500	mg/l	1	EPA 350.1	08/01/01	08/01/01	1080916	
Chemical Oxygen Demand	43.1	5.00	11	"	EPA 410.4	08/03/01	08/08/01	1080976	
Total Dissolved Solids	96.0	10.0		,,	EPA 160.1	08/02/01	08/03/01	1080970	
Total Kjeldahl Nitrogen	0.678	0.500	и	"	EPA 351.2	08/01/01	08/02/01	1080928	
Total Organic Carbon	11.2	1.00	н	rr .	EPA 415.1	07/30/01	08/04/01	1071851	
01AMMF14SW (P1G1016-07) Water				S	Sampled: 07/2	7/01 Recei	ived: 07/31/0	01	
Ammonia-Nitrogen	ND	0.0500	mg/l	1	EPA 350.1	08/01/01	08/01/01	1080916	
Chemical Oxygen Demand	32.3	5.00	"	9	EPA 410.4	08/03/01	08/08/01	1080976	
Total Dissolved Solids	108	10.0	n	n	EPA 160.1	08/02/01	08/03/01	1080978	
Total Kjeldahl Nitrogen	0.505	0.500	"	n	EPA 351.2	08/01/01	08/02/01	1080886	
Total Organic Carbon	8.52	1.00	11	n	EPA 415.1	07/30/01	08/04/01	1071851	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report

Issued: 10/08/01 16:19

Anions per EPA Method 300.0 North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF08SW (P1G1016-01) Water					Sampled: 07/2	7/01 Recei	ived: 07/31/0	01	
Chloride	28.7	5.00	mg/l	10	EPA 300.0	08/06/01	08/07/01	1081066	
Sulfate	ND	10.0	н	n	11	н	11	n	
01AMMF09SW (P1G1016-02) Water					Sampled: 07/2	7/01 Recei	ived: 07/31/	01	
Chloride	26.6	5.00	mg/l	10	EPA 300.0	08/06/01	08/07/01	1081066	
Sulfate	ND	10.0	11	11	H	n	*11	P	
01AMMF10SW (P1G1016-03) Water					Sampled: 07/2	7/01 Rece	ived: 07/31/	01	
Chloride	26.2	5.00	mg/l	10	EPA 300.0	08/06/01	08/07/01	1081066	
Sulfate	ND	10.0	п	Ħ	н	**	n	11	
01AMMF11SW (P1G1016-04) Water					Sampled: 07/2	7/01 Rece	ived: 07/31/	01	
Chloride	26.0	5.00	mg/l	10	EPA 300.0	08/06/01	08/07/01	1081066	
Sulfate	ND	10.0	11	#	**	Ħ	п	If	
01AMMF12SW (P1G1016-05) Water					Sampled: 07/2	.7/01 Rece	ived: 07/31/	' 01	
Chloride	26.1	5.00	mg/l	10	EPA 300.0	08/06/01	08/07/01	1081066	
Sulfate	ND	10.0	n	"	n	п	I†	"	
01AMMF13SW (P1G1016-06) Water					Sampled: 07/2	27/01 Rece	ived: 07/31/	/01	
Chloride	21.9	5.00	mg/l	10	EPA 300.0	08/06/01	08/07/01	1081066	
Sulfate	ND	10.0	11	ıı	11	11	u	71	
01AMMF14SW (P1G1016-07) Water					Sampled: 07/2	27/01 Rece	eived: 07/31/	/01	
Chloride	27.2	5.00	mg/l	10	EPA 300.0	08/06/01	08/07/01	1081066	
Sulfate	ND	10.0	11	11	n	**	ч	H	

North Creek Analytical - Portland

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Jerry Orlando, Project Manager/QA

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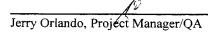
Project: Amchitka Project Number: 21090 Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Total Alkalinity by Conventional Chemistry Parameters per APHA/EPA Methods North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF08SW (P1G1016-01) Water					Sampled: 07/2	7/01 Rece	ived: 07/31/	 01	
Total Alkalinity	ND	10.0	mg/L as CaCO3	1	EPA 310.1	08/03/01	08/04/01	1071866	
01AMMF09SW (P1G1016-02) Water					Sampled: 07/2	27/01 Rece	ived: 07/31/	01	
Total Alkalinity	26.0	10.0	mg/L as CaCO3	1	EPA 310.1	08/03/01	08/04/01	1071866	
01AMMF10SW (P1G1016-03) Water					Sampled: 07/2	27/01 Rece	ived: 07/31/	01	
Total Alkalinity	27.6	10.0	mg/L as CaCO3	1	EPA 310.1	08/03/01	08/04/01	1071866	
01AMMF11SW (P1G1016-04) Water					Sampled: 07/2	27/01 Rece	ived: 07/31/	01	
Total Alkalinity	23.9	10.0	mg/L as CaCO3	1	EPA 310.1	08/03/01	08/04/01	1071866	
01AMMF12SW (P1G1016-05) Water					Sampled: 07/2	27/01 Rece	ived: 07/31/	01	
Total Alkalinity	18.1	10.0	mg/L as CaCO3	1	EPA 310.1	08/03/01	08/04/01	1071866	
01AMMF13SW (P1G1016-06) Water					Sampled: 07/2	27/01 Rece	ived: 07/31/	01	
Total Alkalinity	ND	10.0	mg/L as CaCO3	1	EPA 310.1	08/03/01	08/04/01	1071866	
01AMMF14SW (P1G1016-07) Water					Sampled: 07/2	27/01 Rece	ived: 07/31/	01	
Total Alkalinity	21.5	10.0	mg/L as CaCO3	1	EPA 310.1	08/03/01	08/04/01	1071866	

North Creek Analytical - Portland





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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090 Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Conventional Chemistry Parameters by APHA/EPA Methods North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF08SW (P1G1016-01) Water				Ç	Sampled: 07/27	/01 Recei	ved: 07/31/0	01	
Methylene Blue Active Substances	0.0901	0.0500	mg/l	1	EPA 425.1	07/29/01	07/29/01	1G30026	
Turbidity	1.32	1.00	NTU	11	EPA 180.1	07/28/01	07/28/01	1G31013	
01AMMF09SW (P1G1016-02) Water					Sampled: 07/27	7/01 Recei	ived: 07/31/0	01	
Methylene Blue Active Substances	ND	0.0500	mg/l	1	EPA 425.1	07/29/01	07/29/01	1G30026	
Turbidity	1.15	1.00	NTU	11	EPA 180.1	07/28/01	07/28/01	1G31013	
01AMMF10SW (P1G1016-03) Water					Sampled: 07/27	7/01 Recei	ived: 07/31/	01	
Methylene Blue Active Substances	0.0568	0.0500	mg/l	1	EPA 425.1	07/29/01	07/29/01	1G30026	
Turbidity	1.25	1.00	NTU	n	EPA 180.1	07/28/01	07/28/01	1G31013	
01AMMF11SW (P1G1016-04) Water					Sampled: 07/2	7/01 Rece	ived: 07/31/	01	
Methylene Blue Active Substances	0.0509	0.0500	mg/l	1	EPA 425.1	07/29/01	07/29/01	1G30026	
Turbidity	2.32	1.00	NTU	rr	EPA 180.1	07/28/01	07/28/01	1G31013	
01AMMF12SW (P1G1016-05) Water					Sampled: 07/2	7/01 Rece	ived: 07/31/	01	
Methylene Blue Active Substances	ND	0.0500	mg/l	1	EPA 425.1	07/29/01	07/29/01	1G30026	
Turbidity	2.44	1.00	NTU	н	EPA 180.1	07/28/01	07/28/01	1G31013	
01AMMF13SW (P1G1016-06) Water					Sampled: 07/2	7/01 Rece	eived: 07/31/	/01	
Methylene Blue Active Substances	ND	0.0500	mg/l	1	EPA 425.1	07/29/01	07/29/01	1G30026	
Turbidity	1.06	1.00	NTU	n	EPA 180.1	07/28/01	07/28/01	1G31013	
01AMMF14SW (P1G1016-07) Water					Sampled: 07/2	7/01 Rece	eived: 07/31	/01	
Methylene Blue Active Substances	ND	0.0500	mg/l	1	EPA 425.1	07/29/01	07/29/01	1G30026	
Turbidity	1.28	1.00	NTU	**	EPA 180.1	07/28/01	07/28/01	1G31013	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Anions by EPA Method 300.0 North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMMF08SW (P1G1016-01) Water					Sampled: 07/27	7/01 Recei	ived: 07/31/0	01	
Nitrate-Nitrogen	ND	0.100	mg/L as N	1	EPA 300.0	07/28/01	07/28/01	1G31035	
01AMMF09SW (P1G1016-02) Water					Sampled: 07/27	7/01 Rece	ived: 07/31/0	01	
Nitrate-Nitrogen	ND	0.100	mg/L as N	1	EPA 300.0	07/28/01	07/28/01	1G31035	
01AMMF10SW (P1G1016-03) Water					Sampled: 07/27	7/01 Rece	ived: 07/31/0	01	
Nitrate-Nitrogen	ND	0.100	mg/L as N	1	EPA 300.0	07/28/01	07/28/01	1G31035	
01AMMF11SW (P1G1016-04) Water					Sampled: 07/2	7/01 Rece	ived: 07/31/	01	
Nitrate-Nitrogen	ND	0.100	mg/L as N	1	EPA 300.0	07/28/01	07/28/01	1G31035	
01AMMF12SW (P1G1016-05) Water					Sampled: 07/2	7/01 Rece	ived: 07/31/	01	
Nitrate-Nitrogen	ND	0.100	mg/L as N	1	EPA 300.0	07/28/01	07/28/01	1G31035	
01AMMF13SW (P1G1016-06) Water					Sampled: 07/2	7/01 Rece	ived: 07/31/	01	
Nitrate-Nitrogen	ND	0.100	mg/L as N	1	EPA 300.0	07/28/01	07/28/01	1G31035	
01AMMF14SW (P1G1016-07) Water					Sampled: 07/2	7/01 Rece	ived: 07/31/	01	
Nitrate-Nitrogen	ND	0.100	mg/L as N	1	EPA 300.0	07/28/01	07/28/01	1G31035	

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Total Metals per EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Portland

		UL CITOUR	2 11141 y	cicui i (71 claile					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1	080883 -	EPA	200/3005
---------	----------	------------	----------

Blank (1080883-BLK1)				Prepared: 08/01/	01 Analyzed	1: 08/02/01			
Arsenic	ND	0.00100	mg/l						
Barium	ND	0.00200	11						
Cadmium	ND	0.00100	n						
Chromium	ND	0.00100	и						
Copper	ND	0.00200	"						
Lead	ND	0.00100	**						
Manganese	ND	0.00200	Ħ						
Selenium	ND	0.00100	11						
Silver	ND	0.00100	•						
Zinc	ND	0.00500	"						
LCS (1080883-BS1)				Prepared: 08/01/	01 Analyzeo	d: 08/03/01			
Arsenic	0.111	0.00100	mg/l	0.100	111	80-120			
Barium	0.106	0.00200	"	0.100	106	80-120			
Cadmium	0.107	0.00100	"	0.100	107	80-120			
Chromium	0.108	0.00100	19	0.100	108	80-120			
Copper	0.109	0.00200	11	0.100	109	80-120			
Lead	0.104	0.00100	IT	0.100	104	80-120			
Manganese	0.102	0.00200	п	0.100	102	80-120			
Selenium	0.118	0.00100	11	0.100	118	80-120			
Silver	0.0526	0.00100	n	0.0500	105	80-120			
Zinc	0.112	0.00500	н	0.100	112	80-120			
Duplicate (1080883-DUP1)	Sou	rce: P1G101	16-01	Prepared: 08/01/	01 Analyze	1: 08/03/01			
Arsenic	ND	0.00100	mg/l	ND				20	
Barium	ND	0.00200	11	ND)		4.44	20	
Cadmium	ND	0.00100	.,	ND)			20	
Chromium	ND	0.00100	**	ND)		12.7	20	
Copper	ND	0.00200	"	ND)		3.43	20	
Lead	ND	0.00100	п	0.001	59		153	20	Q-06
Manganese	0.0231	0.00200	#	0.023	33		0.862	20	
Selenium	0.00141	0.00100	n	0.001	90		29.6	20	Q-06
Silver	ND	0.00100	71	ND)		50.8	20	Q-06
Zinc	ND	0.00500	**	ND)		80.5	20	Q-06

North Creek Analytical - Portland

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Page 29 of 43



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Prepared: 08/01/01 Analyzed: 08/03/01

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Total Metals per EPA 6000/7000 Series Methods - Quality Control

North	Creek	Analytical	- Portland
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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Source: P1G1016-01

Batch 1080883 - EPA 200/3005

Matrix Spike (1080883-MS1)

Arsenic	0.110	0.00100	mg/l	0.100	ND	110	75-125
Barium	0.107	0.00200	TŤ	0.100	ND	107	75-125
Cadmium	0.108	0.00100	"	0.100	ND	108	75-125
Chromium	0.110	0.00100	n	0.100	ND	109	75-125
Copper	0.110	0.00200	"	0.100	ND	108	75-125
Lead	0.102	0.00100	**	0.100	0.00159	100	75-125
Manganese	0.127	0.00200	r,	0.100	0.0233	104	75-125
Selenium	0.113	0.00100	"	0.100	0.00190	111	75-125
Silver	0.0515	0.00100	ч	0.0500	ND	102	75-125
Zinc	0.111	0.00500	11	0.100	ND	107	75-125
Matrix Spike (1080883-MS2)	Sou	rce: P1G101	6.02	Dramarad	09/01/01	Analyza	1: 08/03/01
Mail IX Spike (1000003-M32)	Son	ice: Ligini	0-02	riepaieu.	00/01/01	Allalyze	1. 00/05/01
Arsenic	0.112	0.00100	mg/l	0.100	ND	112	75-125
		· · · · · · · · · · · · · · · · · · ·					
Arsenic	0.112	0.00100	mg/l	0.100	ND	112	75-125
Arsenic Barium	0.112 0.108	0.00100 0.00200	mg/l	0.100 0.100	ND ND	112 108	75-125 75-125
Arsenic Barium Cadmium	0.112 0.108 0.112	0.00100 0.00200 0.00100	mg/l	0.100 0.100 0.100	ND ND ND	112 108 112	75-125 75-125 75-125
Arsenic Barium Cadmium Chromium	0.112 0.108 0.112 0.110	0.00100 0.00200 0.00100 0.00100	mg/l	0.100 0.100 0.100 0.100	ND ND ND ND	112 108 112 109	75-125 75-125 75-125 75-125
Arsenic Barium Cadmium Chromium Copper	0.112 0.108 0.112 0.110 0.110	0.00100 0.00200 0.00100 0.00100 0.00200	mg/l " "	0.100 0.100 0.100 0.100 0.100	ND ND ND ND	112 108 112 109 109	75-125 75-125 75-125 75-125 75-125
Arsenic Barium Cadmium Chromium Copper Lead	0.112 0.108 0.112 0.110 0.110 0.105	0.00100 0.00200 0.00100 0.00100 0.00200 0.00100	mg/l	0.100 0.100 0.100 0.100 0.100 0.100	ND ND ND ND ND	112 108 112 109 109 105	75-125 75-125 75-125 75-125 75-125 75-125
Arsenic Barium Cadmium Chromium Copper Lead Manganese	0.112 0.108 0.112 0.110 0.110 0.105 0.134	0.00100 0.00200 0.00100 0.00100 0.00200 0.00100 0.00200	mg/l	0.100 0.100 0.100 0.100 0.100 0.100 0.100	ND ND ND ND ND ND ND	112 108 112 109 109 105 104	75-125 75-125 75-125 75-125 75-125 75-125 75-125
Arsenic Barium Cadmium Chromium Copper Lead Manganese Selenium	0.112 0.108 0.112 0.110 0.110 0.105 0.134 0.118	0.00100 0.00200 0.00100 0.00100 0.00200 0.00100 0.00200 0.00100	mg/l	0.100 0.100 0.100 0.100 0.100 0.100 0.100	ND ND ND ND ND ND O.0298	112 108 112 109 109 105 104 117	75-125 75-125 75-125 75-125 75-125 75-125 75-125 75-125

Batch 1081293 - EPA	1 200	0/3005
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Blank (1081293-BLK1)				Prepared: 08/13/01 Analyzed: 08/15/01
Iron	ND	0.100	mg/l	
Magnesium	ND	0.100	91-	
Potassium	ND	1.00	n	
Sodium	ND	1.00	**	

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne K.ranawetter

Amended Report

Issued: 10/08/01 16:19

Total Metals per EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1081293 - EPA 200/3005										
LCS (1081293-BS1)				Prepared	08/13/01	Analyzed	i: 08/15/01	l		

lron	1.98	0.100	mg/I	2.00		99.0	90-110			
Magnesium	9.15	0.100	11	10.0		91.5	90-110			
Potassium	10.2	1.00	п	10.0		102	91.1-115			
Sodium	10.0	1.00	ч	10.0		100	89.2-107			
Duplicate (1081293-DUP1)	Sour	ce: P1G101	6-01	Prepared:	08/13/01	Analyze	d: 08/15/01			
Iron	0.218	0.100	mg/l		0.224			2.71	20	
Magnesium	2.26	0.100	Ħ		2.21			2.24	20	
Potassium	2.07	1.00	"		2.28			9.66	20	
Sodium	17.0	1.00	Ħ		16.8			1.18	20	
Matrix Spike (1081293-MS1)	Sour	ce: P1G101	16-01	Prepared:	08/13/01	Analyze	d: 08/15/01			
Iron	2.28	0.100	mg/l	2.00	0.224	103	75-125			
Magnesium	12.2	0.100	**	10.0	2.21	99.9	75-125			
Potassium	12.4	1.00	n	10.0	2.28	101	75-125			
Sodium	27.5	1.00	"	10.0	16.8	107	75-125			

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Project: Amenitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Mercury by EPA Method 1631 - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1081079 - Metals										
Blank (1081079-BLK1)				Prepared:	08/07/01	Analyzed	l: 08/09/01			· · · · · · · · · · · · · · · · · ·
Mercury	ND	0.0000100	mg/l						v	
LCS (1081079-BS1)				Prepared:	08/07/01	Analyzed	l: 08/09/01			
Mercury	0.000132	0.0000100	mg/l	0.000125		106	85-115			
Duplicate (1081079-DUP1)	So	urce: P1G10	16-03	Prepared:	08/07/01	Analyzed	l: 08/09/01			
Mercury	0.0000212	0.0000100	mg/l	-	0.0000200			5.83	20	
Matrix Spike (1081079-MS1)	So	urce: P1G10	16-04	Prepared:	08/07/01	Analyzed	l: 08/09/01			
Mercury	0.000161	0.0000100	mg/l	0.000125	0.0000212	2 112	75-125			
Matrix Spike (1081079-MS2)	So	urce: P1H004	44-01	Prepared:	08/07/01	Analyzed	l: 08/09/01			
Mercury	0.000135	0.0000100	mg/l	0.000125	ND	107	75-125			

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 21090 Project Manager: Anne Kranawetter **Amended Report** Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B - Quality Control

North Creek Analytical - Portland

						 				1
	Reporting		Spike	Source		%REC		RPD		l
Analyte Resul	t Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	

Ratch	1	0210	114	- EPA	5030B
Date	. 1	1767 8 11		- 121 -	-711-21111

Blank (1081014-BLK1)				Prepared & Analyzed: 08/04/01
Acetone	ND	25.0	ug/l	
Benzene	ND	1.00	17	
Bromobenzene	ND	1.00	11	
Bromochloromethane	ND	1.00	•	
Bromodichloromethane	ND	1.00	н	
Bromoform	ND	1.00	11	
Bromomethane	ND	5.00	17	
2-Butanone	ND	10.0	11	
n-Butylbenzene	ND	5.00	11	
sec-Butylbenzene	ND	1.00	11	
tert-Butylbenzene	ND	1.00	u	
Carbon disulfide	ND	10.0	**	
Carbon tetrachloride	ND	1.00	**	
Chlorobenzene	ND	1.00	11	
Chloroethane	ND	1.00	н	
Chloroform	ND	1.00	11	
Chloromethane	ND	5.00	rf	
2-Chlorotoluene	ND	1.00	H	
4-Chlorotoluene	ND	1.00	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	
Dibromochloromethane	ND	1.00	"	
1,2-Dibromoethane	ND	1.00	11	
Dibromomethane	ND	1.00	"	
1,2-Dichlorobenzene	ND	1.00	"	
1,3-Dichlorobenzene	ND	1.00	н	
1,4-Dichlorobenzene	ND	1.00	ti	
Dichlorodifluoromethane	ND	5.00	ŧr	
1,1-Dichloroethane	ND	1.00	**	
1,2-Dichloroethane	ND	1.00	**	
1,1-Dichloroethene	ND	1.00	н	
cis-1,2-Dichloroethene	ND	1.00	*1	
trans-1,2-Dichloroethene	ND	1.00	н	
1,2-Dichloropropane	ND	1.00	"	
1,3-Dichloropropane	ND	1.00	"	
2,2-Dichloropropane	ND	1.00	**	
1,1-Dichloropropene	ND	1.00	н	

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Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Volatile Organic Compounds per EPA Method 8260B - Quality Control

North Creek Analytical - Portland

ļ		Reporting		Spike	Source		%REC		RPD	ľ	ŀ
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	

Batch 1081014 - EPA 5030F	Batch	ch 1081	014 -	EPA	5030B
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Blank (1081014-BLK1)				Prepared & Analyzed: 08/04/01
cis-1,3-Dichloropropene	ND	1.00	ug/l	
trans-1,3-Dichloropropene	ND	1.00	11	
Ethylbenzene	ND	1.00	19	
Hexachlorobutadiene	ND	2.00	17	
2-Hexanone	ND	10.0	"	
Isopropylbenzene	ND	2.00	"	
p-Isopropyltoluene	ND	2.00	n	
4-Methyl-2-pentanone	ND	5.00	**	
Methyl tert-butyl ether	ND	1.00	11	
Methylene chloride	ND	5.00	**	
Naphthalene	ND	2.00	**	
n-Propylbenzene	ND	1.00	**	
Styrene	ND	1.00	n	
1,1,1,2-Tetrachloroethane	ND	1.00	11	
1,1,2,2-Tetrachloroethane	ND	1.00	π	
Tetrachloroethene	ND	1.00	п	
Toluene	ND	1.00	11	
1,2,3-Trichlorobenzene	ND	1.00	п	
1,2,4-Trichlorobenzene	ND	1.00	11	
1,1,1-Trichloroethane	ND	1.00	11	
1,1,2-Trichloroethane	ND	1.00	"	
Trichloroethene	ND	1.00	H	
Trichlorofluoromethane	ND	1.00	**	
1,2,3-Trichloropropane	ND	1.00	н	
1,2,4-Trimethylbenzene	ND	1.00	11	
1,3,5-Trimethylbenzene	ND	1.00	11	
Vinyl chloride	ND	1.00	н	
o-Xylene	ND	1.00	"	
m,p-Xylene	ND	2.00	"	
Surr: 4-BFB	20.2		"	20.0 101 75-125
Surr: 1,2-DCA-d4	17.7		"	20.0 88.5 75-125
Surr: Dibromofluoromethane	21.1		"	20.0 106 75-125
Surr: Toluene-d8	20.2		"	20.0 101 75-125

North Creek Analytical - Portland

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%REC

Limits

RPD

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Analyte

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

RPD

Limit

Notes

Volatile Organic Compounds per EPA Method 8260B - Quality Control

North	Crook	Analy	rtical _	Portland
1101 UI	CIECK	Anan	/ucai -	romanu

Units

Spike

Level

20.0

20.0

20.0

20.0

20.0

20.0

20.0

ND

ND

ND

96.0

100

92.0

103

88.5

106

100

Source

Result

%REC

Reporting

Limit

Result

19.2

20.0

18.4

20.6

17.7

21.1

20.0

1.00

1.00

1.00

LCS (1081014-BS1)				Prepared &	& Analyze	d: 08/04/	01			
Benzene	20.5	1.00	ug/l	20.0	<u></u>	102	80-125			
Chlorobenzene	21.6	1.00	11	20.0		108	80-125			
1,1-Dichloroethene	19.3	1.00	Ħ	20.0		96.5	70-135			
Toluene	21.0	1.00	"	20.0		105	80-125			
Trichloroethene	19.0	1.00	n	20.0		95.0	70-130			
Surr: 4-BFB	21.2		"	20.0		106	75-125			
Surr: 1,2-DCA-d4	18.2		"	20.0		91.0	75-125			
Surr: Dibromofluoromethane	21.6		n	20.0		108	75-125			
Surr: Toluene-d8	20.7		"	20.0		104	75-125			
Matrix Spike (1081014-MS1)	Sour	ce: P1G101	6-02	Prepared &	& Analyz	ed: 08/04/	01			
Benzene	19.5	1.00	ug/l	20.0	ND	97.5	80-125			
Chlorobenzene	21.9	1.00	**	20.0	ND	110	80-125			
1,1-Dichloroethene	19.2	1.00	**	20.0	ND	96.0	70-135			
Toluene	19.9	1.00	**	20.0	ND	99.5	80-125			
Trichloroethene	18.6	1.00	n	20.0	ND	93.0	70-130			
Surr: 4-BFB	21.0	, , , , , , , , , , , , , , , , , , , ,	"	20.0		105	75-125			
Surr: 1,2-DCA-d4	18.0		"	20.0		90.0	75-125			
Surr: Dibromofluoromethane	21.2		"	20.0		106	75-125			
Surr: Toluene-d8	20.4		"	20.0		102	75-125			
Matrix Spike Dup (1081014-MSD1)	Sour	ce: P1G10	16-02	Prepared	& Analyz	ed: 08/04	/01			
Benzene	19.7	1.00	ug/l	20.0	ND	98.5	80-125	1.02	25	
Chlorobenzene	21.8	1.00	**	20.0	ND	109	80-125	0.458	25	

North Creek Analytical - Portland

1,1-Dichloroethene

Trichloroethene

Surr: 1,2-DCA-d4

Surr: Toluene-d8

Surr: Dibromofluoromethane

Surr: 4-BFB

Toluene

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70-135

80-125

70-130

75-125

75-125

75-125

75-125

0.00

0.501

1.08

25

25

25

Jerry Orlando, Project Manager/QA



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Batch 1080886 - Wet Chem

Ammonia-Nitrogen

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Conventional Chemistry Parameters per APHA/EPA Methods - Quality Control North Creek Analytical - Portland

F	1101	di Cicck	TXAIGHT Y	ticai - i v	or tranta					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1071851 - Wet Chem										
Blank (1071851-BLK1)				Prepared:	: 07/30/01	Analyzed	1: 08/04/01			
Total Organic Carbon	ND	1.00	mg/l			-				
LCS (1071851-BS1)				Prepared	: 07/30/01	Analyzeo	1: 08/04/01			
Total Organic Carbon	18.9	1.00	mg/l	20.0		94.5	85-114			

Duplicate (1071851-DUP1)	Sou	rce: P1G091	1-02	Prepared: 07/30/01	Analyzed: 08/04/01		
Total Organic Carbon	1.91	1.00	mg/l	1.89		1.05	20

Matrix Spike (1071851-MS1)	Sour	ce: P1G091	4-02	Prepared:	07/30/01	Analyzed	1: 08/04/01
Total Organic Carbon	26.7	1.00	mg/l	25.0	1.89	99.2	70-130

Blank (1080886-BLK1)				Prepared: 08/01/01	Analyzed: 08/02/01
Total Kieldahl Nitrogen	ND	0.500	ma/l		

LCS (1080886-BS1)				Prepared: 08/01	I/01 Analyzed	1: 08/02/01
Total Kieldahl Nitrogen	9.99	0.500	mg/l	10.0	99.9	80-120

Duplicate (1080886-DUP1)	Sour	ce: P1G0998-01	Prepared: 08/01/01 Analyzed: 08/02/01	
Total Kjeldahl Nitrogen	ND	0.500 mg/l	ND	20
M-4-1 - C -11 - (100000 AMC1)	S	D1/C0009 01	Prepared: 08/01/01 Analyzed: 08/02/01	

Matrix Spike (1080886-MS1)	Source: P1G0998-01			Prepared:	08/01/01	Analyzed: 08/02/0		
Total Kjeldahl Nitrogen	4.48	0.500	mg/l	5.00	ND	89.6	75-125	

ND

Batch 1080916 - Wet Chem	
Rlank (1080916_RLK1)	Prenared & Analyzed: 08/01/01

0.0500

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report Issued: 10/08/01 16:19

Conventional Chemistry Parameters per APHA/EPA Methods - Quality Control

North	Creek	Analy	vtical -	Portland
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Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
			Prepared	& Analyzo	ed: 08/01/	01			
2.03	0.0500	mg/l	2.00		102	85-115			
Sou	rce: P1G091	13-02	Prepared	& Analyz	ed: 08/01/	01			
ND	0.0500	mg/l		ND			-	20	
Sou	rce: P1G09	13-02	Prepared	& Analyz	ed: 08/01/	01			
1.97	0.0500	mg/l	2.00	ND	98.5	75-125			
Source: P1G0913-02			Prepared						
1.99	0.0500	mg/l	2.00	ND	99.5	75-125	1.01	20	
			Prepared:	08/02/01	Analyze	d: 08/03/01			
ND	10.0	mg/l							
			Prepared	: 08/02/01	Analyze	d: 08/03/01			
104	10.0	mg/l	100		104	80-120			
Sou	ırce: P1H00	18-03	Prepared	: 08/02/01	Analyze	d: 08/03/01			
542	10.0	mg/l		546			0.735	20	
			Prepared	: 08/03/01	Analyze	d: 08/08/01			
ND	5.00	mg/l							
	2.03	Result Limit 2.03 0.0500 Source: P1G09 ND 0.0500 Source: P1G09 1.97 0.0500 Source: P1G09 1.99 0.0500 ND 10.0 104 10.0 Source: P1H00 542 10.0	Result Limit Units	Result Limit Units Spike Level	Prepared & Analyza	Result Limit Units Level Result %REC	Result Limit Units Level Result %REC Limits	Result Spike Source Result Re	Result Spike Source Result Re

North Creek Analytical - Portland

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Environmental Laboratory Network Page 37 of 43 North Creek Analytical, Inc.



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka Project Number: 21090

Project Manager: Anne Kranawetter

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Issued: 10/08/01 16:19

Conventional Chemistry Parameters per APHA/EPA Methods - Quality Control

North Creek Analytical - Portland

Analyte	Danish	Reporting	**	Spike	Source	wara	%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1080976 - Wet Chem										
LCS (1080976-BS1)				Prepared:	08/03/01	Analyzed	1: 08/08/01	•		
Chemical Oxygen Demand	29.4	5.00	mg/l	30.0	*	98.0	75-125			
Duplicate (1080976-DUP1)	Sou	rce: P1G09	53-01	Prepared:	08/03/01	Analyzed	1: 08/08/01			
Chemical Oxygen Demand	24.6	5.00	mg/l		27.0			9.30	20	

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North Creek Analytical, Inc. **Environmental Laboratory Network**



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

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Project: Amchitka Project Number: 21090

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Issued: 10/08/01 16:19

Anions per EPA Method 300.0 - Quality Control

Project Manager: Anne Kranawetter

	Nor	th Creek	Analyt	ical - Po	ortland					
	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
et Chem										

Batch 1081066 - Wet Chem										
Blank (1081066-BLK1)				Prepared: (08/06/01	Analyzed	: 08/07/01			
Chloride	ND	0.500	mg/l							
Sulfate	ND	1.00	**							
LCS (1081066-BS1)				Prepared:	08/06/01	Analyzed	: 08/07/01			
Chloride	10.0	1.00	mg/l	10.0		100	85-115			
Sulfate	29.6	2.00	п	30.0		98.7	85-115			
Duplicate (1081066-DUP1)	Sour	ce: P1G101	16-01	Prepared:		Analyzed	1: 08/07/01			
Chloride	28.8	5.00	mg/l		28.7			0.348	20	
Sulfate	ND	10.0	11		ND			7.21	20	
Matrix Spike (1081066-MS1)	Sour	rce: P1G10	16-01	Prepared:	08/06/01	Analyzed	1: 08/07/01			
Chloride	52.0	5.56	mg/l	22.2	28.7	105	75-125			
Sulfate	43.6	5.56	**	44.4	ND	89.5	75-125			
Matrix Spike Dup (1081066-MSD1)	Sou	rce: P1G10	16-01	Prepared:	08/06/01		d: 08/07/01			
Chloride	51.9	5.56	mg/l	22.2	28.7	105	75-125	0.192	20	
Suifate	43.4	5.56	n	44.4	ND	89.0	75-125	0.460	20	

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Anchorage, AK 99502-1116

Project Number: 21090

Project: Amchitka

Project Manager: Anne Kranawetter

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Issued: 10/08/01 16:19

Total Alkalinity by Conventional Chemistry Parameters per APHA/EPA Methods - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1071866 - Aqueous Extraction						·		· ••		
Blank (1071866-BLK1)				Prepared:	08/03/01	Analyzed	1: 08/04/01			
Total Alkalinity	ND	10.0	mg/L as CaCO3		· - ·					
LCS (1071866-BS1)				Prepared	08/03/01	Analyzed	1: 08/04/01			
Total Alkalinity	122	10.0	mg/L as CaCO3	125		97.6	85-115			
Duplicate (1071866-DUP1)	So	urce: P1G08	37-01	Prepared	: 08/03/01	Analyzed	1: 08/04/01			
Total Alkalinity	30.4	10.0	mg/L as CaCO3		23.6			25.2	20	Q-1

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Project: Arnchitka

Project Number: 21090

Project Manager: Anne Kranawetter

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Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

North Creek Analytical - Bothell RPD Spike %REC Source Reporting Limits **RPD** Limit Notes Result %REC Units Level Result Limit Analyte Batch 1G30026 - General Preparation Prepared & Analyzed: 07/29/01 Blank (1G30026-BLK1) 0.0500 ND mg/l Methylene Blue Active Substances Prepared & Analyzed: 07/29/01 LCS (1G30026-BS1) 80-120 0.0500 mg/l 0.150 0.160 Methylene Blue Active Substances Prepared & Analyzed: 07/29/01 LCS Dup (1G30026-BSD1) 0.627 80-120 0.150 0.0500 0.159 mg/l Methylene Blue Active Substances Prepared & Analyzed: 07/29/01 Source: P1G1016-02 Duplicate (1G30026-DUP1) Q-06 20 40.4 ND 0.0645 0.0500 mg/l Methylene Blue Active Substances Prepared & Analyzed: 07/29/01 Source: P1G1016-02 Matrix Spike (1G30026-MS1) Q-01 80-120 ND 76.1 0.150 0.157 0.0500 mg/l Methylene Blue Active Substances Batch 1G31013 - General Preparation Prepared & Analyzed: 07/28/01 Blank (1G31013-BLK1) NTU ND 1.00 Turbidity Prepared & Analyzed: 07/28/01 LCS (1G31013-BS1) 90-110 96.5 NTU 19.3 1.00 Turbidity Prepared & Analyzed: 07/28/01 LCS Dup (1G31013-BSD1) 20 90-110 0.517 97.0 20.0 NTU 1.00 19.4 Turbidity Prepared & Analyzed: 07/28/01 Source: P1G1016-07 Duplicate (1G31013-DUP1)

1.34

1.00

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Turbidity

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Nitrate-Nitrogen

Project: Amchitka
Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report

Issued: 10/08/01 16:19

Anions by EPA Method 300.0 - Quality Control

	No	orth Creek Analy	tical - I	<u> Bothell</u>					
Analyte	Result	Reporting Limit . Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1G31035 - General Preparation									
Blank (1G31035-BLK1)			Prepared	& Analyz	ed: 07/28/	01			

LCS (1G31035-BS1)		Pr	epared & Ar	nalyzed: 07/28/	01	
Nitrate-Nitrogen	1.02	0.100 mg/L as N	1.00	102	90-110	
LCS Dup (1G31035-BSD1)		Pr	repared & Ai	nalyzed: 07/28/	01	

0.100 mg/L as N

Dunk-s4s (1C21025 DUD1)	G	po: R1C0622_02	Dramarad & A	nalvzed: 07/28/0	1			
Nitrate-Nitrogen	1.03	0.100 mg/L as N	1.00	103	90-110	0.976	20	

Duplicate (1G31035-DUP1)	Source	DIG0022-02	Trepared to Thiaryzea: 07/20/05	
Nitrate-Nitrogen	ND	0.500 mg/L as N	ND	25

Duplicate (1G31035-DUP2)	Source	: P1G1016-01	Prepared & Analyzed: 07/28/01	
Nitrate-Nitrogen	ND	0.100 mg/L as N	ND	25

Matrix Spike (1G31035-MS1)	Source	e: B1G0622-02	Prepared &	& Analyze	d: 07/28/	01
Nitrate-Nitrogen	5.08	0.500 mg/L as N	5.00	ND	102	60-130

ND

Matrix Spike (1G31035-MS2)	Source	: P1G1016-01	Prepared &	& Analyze	d: 07/28/	01
Nitrate-Nitrogen	1.04	0.100 mg/L as N	1.00	ND	104	60-130

North Creek Analytical - Portland



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Anchorage, AK 99502-1116

Project: Arnchitka

Project Number: 21090

Project Manager: Anne Kranawetter

Amended Report

Issued: 10/08/01 16:19

Notes and Definitions

The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the Q-01 recovery for this analyte does not represent an out-of-control condition for the batch.

Analyses are not controlled on RPD values from sample concentrations less than 5 times the reporting limit.

RPD is not applicable for analyte concentrations less than 5 times the MRL. Q-16

DET Analyte DETECTED

Analyte NOT DETECTED at or above the reporting limit ND

Not Reported NR

Q-06

Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%. dry

Sample results reported on a wet weight basis (as received) wet

Relative Percent Difference **RPD**

North Creek Analytical - Portland

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